GENERALSHIP AND THE ART OF SENIOR COMMAND: HISTORICAL AND SCIENTIFIC PERSPECTIVES

A thesis presented to the faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

MITCHELL M. ZAIS, MAJ, USA
B.S., United States Military Academy, 1969
M.S., University of Washington, 1979

Fort Leavenworth, Kansas

May, 1985

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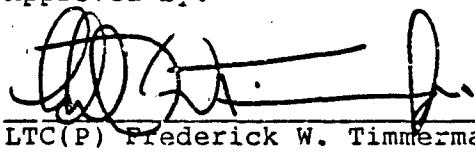

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other government agency. (References to this study should include the foregoing statement.)

ABSTRACT

GENERALSHIP AND THE ART OF SENIOR COMMAND: HISTORICAL AND SCIENTIFIC PERSPECTIVES, By Major Mitchell M. Zais, USA, 185 pages.

Based on a review of the literature, this study identifies the qualities and attributes of successful senior commanders at two-star level and above. A taxonomy is developed defining and describing leadership and management as component elements of commandership.

Previous studies of senior command have approached the topic from two widely disparate disciplines, history and science. Historical approaches have been based upon the testimony of senior military commanders, the assertions of military theorists, the post hoc analysis of historians, or some combination of the three. The scientific study of senior command is based upon the behavioral sciences of individual, social, and organizational psychology as well as management theory. This study compares and contrasts the findings of these two disciplines of history and science.

Large differences in the historical and scientific conceptualizations of senior command were found. These differences reflect divergent means of viewing the world and organizing information. Evidence suggests that the general's intellect, character, and temperament are more important in determining success at this level than are specific skills, ability, knowledge, or experience. Additionally, significant differences were suggested for the requirements for generalship during war and peace, as well as between staff positions and combat command. A proposal is offered for the reconciliation of the oft times conflicting historical and scientific perspectives of commandership in order to improve the preparation, selection, training, and assignment of general officers.

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Generalship

For what art can surpass that of the general? - An art which deals not with dead matter but with living beings, who are subject to every impression of the moment, such as fear, precipitation, exhaustion, - in short, to every human passion and excitement. The general has not only to reckon with unknown quantities, such as time, weather, accidents of all kinds, but he has before him one who seeks to disturb and frustrate his plans and labours in every way; and at the same time this man, upon whom all eyes are directed, feels upon his mind the weight of responsibility not only for the lives and honour of hundreds of thousands, but even for the welfare and existence of his country.

A. von Boguslawski
(Fuller, 1936, p. 3)

1

CHAPTER 1

The Need for Senior Leadership Doctrine

> Every level of command has its own intellectual standards; its own prerequisites for fame and honor... There are commanders-in-chief who could not have led a cavalry regiment with distinction, and cavalry commanders who could not have led armies.
>
> Carl von Clausewitz
> On War, 1832, pp. 111 & 146

THE PROBLEM

As the Army prepares to face the challenge of the global responsibilities in the 1990s, increasing demands will be placed upon its senior leadership. The range of potential military conflict extends from strategic nuclear war or battle with massive Soviet conventional forces, on the one hand, across the spectrum of conflict down to isolated incidents of terrorism, and limited guerrilla wars, on the other. Along with the war fighting skills required of our senior combat commanders, there will be increasing requirements for exceptional executive ability to manage the intense competition for and allocation of resources both within the federal bureaucracy and the Department of Defense. In other words, the Army will need both warrior-leaders and

soldier-managers at the highest levels who can execute their respective roles with effectiveness and efficiency. The former must be able to fight and win our nation's battles, the latter must create and maintain the force.

Presently, however, there is no doctrinal base which can serve to guide the Army in the selection or development of these senior leaders. There is not even an agreed upon doctrine which distinguishes the requirements for leadership at senior levels of command from the requirements for leadership at lower organizational levels. In fact, it is only within the last few years that the Army has recognized, even informally, that requirements for leadership skills and abilities change with organizational level. And while virtual libraries of material have been written on the topic of leadership, nearly all this literature tends to assume that the qualities and attributes which are required for success are the same irrespective of position or organizational level. Thus, one is left to presume that the most successful battalion or brigade commanders will necessarily perform most effectively at higher levels of command such as Corps or Army. It is not the purpose of this paper to debate that premise. It assumes from the start that the reader readily recognizes

the fallacy of this argument and accepts as axiomatic the opening quotation from Clausewitz's On War.

It would seem practically self-evident that the leadership exercised by the squad leader is very different from the leadership exercised by a battalion commander; this in turn is different from the division commander's leadership, which also differs from that of the Chief of Staff of the Army. As Clausewitz has noted, "There are Field Marshals who would not have shone at the head of a cavalry regiment and vice versa" (1832, p. 58). Presumably this notion will meet resistance from successful battalion and brigade commanders who, having commanded well at intermediate levels would like to assume that they, therefore, possess the wherewithal to succeed as two and three star commanders. But there is little evidence to support the position that the best battalion commanders necessarily make the best army commanders. James A. Stokesbury, coauthor of Masters of the Art of Command, illustrates this principle in the instance of Robert E. Lee. From his analysis, Stokesbury concluded that,

> In spite of a brilliant record in the Mexican War and being offered the command of Union forces, Lee did not do anything outstanding in the Confederate service until after his appointment to command the Army of Northern Virginia (1984, p. 11).

And as Norman Dixon (1976) has amply pointed out, this failure to recognize the changing requirements for leadership at different organizational levels can have unfortunate military consequences.

> ...though the leadership qualities reflected at one level of command may result in promotion, they are often not those relevant to a higher level of command. Just as a brilliant general, ...may have been an indifferent brigadier, mediocre battalion commander and third-rate platoon commander, so, more seriously, there have been outstanding platoon and company commanders who, promoted on the basis of their performance at these levels, ended up as inept if beloved generals.

In spite of the observations of Clausewitz, Stokesbury, Dixon, and others, there has been very little written concerning the specific prerequisites required for leading large military formations. In fact, there is no U.S. Army doctrine, statement of philosophy, or other document which specifies the necessary characteristics of our most senior commanders. The research question and the purpose of this paper, then, is to review the leadership literature to identify and describe those qualities and attributes, skills and abilities which could be seen as prerequisites for effective senior command, and, where possible, to describe the impact of the situation on these prerequisites.

PROBLEM BACKGROUND

> Virtually anything that can be said about leadership can be denied or disproven. Leadership studies, to the extent they exist, are unscientific. Countless paradoxes and contradictions litter every manuscript on leadership.
>
> Thomas E. Cronin
> "Thinking about Leadership", 1984, p. 194.

Identifying the unique requirements for senior level leadership is not merely an academic exercise or a moot issue. Currently, several agencies within the Army are wrestling with this problem. The Center for Army Leadership (CAL), at the Command and General Staff College, Fort Leavenworth, is presently drafting a doctrinal manual to answer this question, "What should we expect of our senior leaders?" The Army Research Institute for the Behavioral and Social Sciences has embarked upon an ambitious program of research using various models of organizational behavior to identify mental requirements for leadership at all organizational levels within the Army.

In 1968, the U.S. Army attempted to describe Leadership at Senior Levels of Command, in Department of the Army Pamphlet 600-15. However, the authors of this study "concluded that the source of understanding [of leadership at senior levels of command] could be found in the behavioral and social sciences." As a result, this

work failed to distinguish peacetime requirements from war conditions and focused almost exclusively on managerial skills to the exclusion of unique combat related competencies. Further, it focused almost exclusively on bureaucratic aspects of executiveship and was not effective in considering the unique aspects of military organizations.

A further deficiency of this publication is that it failed to define "senior level." Thus, one is left to presume that commander requirements at battalion or brigade level are identical to those at corps and army level.

For several reasons it is important that the Army develop a coherent doctrine which identifies the requirements for leadership at senior levels of command. First, such a doctrine would serve as a basis for formal leader development efforts. Presently, there are two primary means by which the Army attempts to develop its leaders. The first of these is through coaching of subordinates and providing feedback on the quality and manner of their performance. No one discounts the importance of counseling subordinates and of periodically providing feedback on their performance. In fact, recently, the Chief of Staff of the Army asserted that, "no other pursuit can better [prepare] us for the

accomplishment of our missions and ensure the future of our Army" (Wickham, 1984). However, at the same time, he also pointed out that a recent survey revealed that only 31% of the officer corps feel that they receive adequate coaching or developmental assistance from their bosses.

The second formal method of leader development is through leadership instruction in the Army school system. Within the past few years the Army has been effective in developing training packages for NCOs and company grade officers. However, because there is simply no consensus about what constitutes senior leadership, and because there is no Army doctrine that coherently describes senior leadership and its functions, formal leadership training beyond company level is inadequate at best. Leadership training within the Army generally reflects the current state of leadership training within society and is based primarily on civilian models. In a comprehensive review of leadership training, J.A. Olmstead (1980), of the Human Resources Research Organization concluded that,

> ...despite the enormous expenditure of resources, the field of leadership training is in considerable disarray, and there is not available any organized knowledge base concerning either the content of leadership instruction or the most effective methods for transmitting this content.

Within the past 18 months a new leadership doctrine for company level leaders has been promulgated by the Center for Army Leadership in FM 22-100, Military Leadership. However, there is no companion doctrine which describes the requirements for leadership above the company level, either at the intermediate levels of battalion or brigade, or the senior levels of division, corps, and army. Such a doctrine would provide a second benefit in that it would form the foundation for formal leadership instruction at the Command and General Staff College (intermediate level) and at the Army War College (senior level). The Army would then be able to adopt a clearly articulated leadership philosophy characterized by progressive and sequential instruction and developmental efforts.

A third advantage of a coherent senior level leadership doctrine is that it could aid in the identification of those with the requisite ability and skills to advance to the next higher grade. This is an issue of considerable significance to the Army. For example, in the present OER system, the senior rater is directed to evaluate "potential for performance at the next higher grade," irrespective of performance in present position. Tacitly this is acknowledgement of the fact that different skills and abilities are required for

different organizational levels. Otherwise, the best indicator of future potential would be present performance.

Every senior rater has a set of characteristics and abilities in mind when he evaluates potential. For one person writing and speaking ability may be paramount; for another, interpersonal skills and the ability to work well with others may be most critical; yet another senior rater might first consider tactical ability in making judgments about a subordinate's potential for service at higher levels of responsibility; a fourth might consider values and ethical standards to be the most important indicator.

Clearly, not all officers have similar characteristics, or equal skills and ability, drive or ambition. Others develop at different rates. An uninspired lieutenant may mature into a highly motivated major. A reticent but analytic and articulate junior officer may be mediocre as a combat leader but prove to be a gifted doctrine writer or staff officer. An organized and coherent doctrine which adequately describes the characteristics, skills, and abilities required for effective performance at various organizational levels and types of positions would aid

senior raters in evaluating potential and would facilitate the identification of officers for both advancement and appropriate assignment.

In summary, therefore, it is important to develop a coherent theory of leadership at varying organizational levels which can serve as a basis for formal leader development efforts, both through senior subordinate counseling and coaching and within the Army school system, as well as to aid in the evaluation and identification of officers for promotion and assignment. Presently, doctrine exists for leadership requirements at company level. This paper will develop a conceptual framework to identify the requirements for senior command, herein defined as division level and above. The investigation of the requirements for commandership at intermediate levels, battalion and brigade, awaits the efforts of another researcher.

RESEARCH METHODS AND TECHNIQUES

The method used for answering the research question shall consist primarily of a literature review from two types of sources. The first source constitutes the historical perspective. Within this perspective a large number of noted senior commanders have recorded their thoughts on senior command. Additionally, many military

theorists have described the prerequisites for leading large military formations. Clausewitz, for example, has explained in great detail the meaning of "military genius" and Sun Tzu has described the necessary skills of the senior commander in the field. These sources will provide the historical perspective of senior command.

The second source shall provide the scientific perspective of senior command. It is based on the large body of organizational behavior and management theory literature. A great deal of this literature supports the case for the unique requirements for leading large organizations as well as describes what these requirements are. For example, Elliot Jacques (1984a, 1984b) has developed a model which describes the time perspectives and level of cognitive complexity required by leaders at various organizational levels; Warren Bennis (1984) has described four competencies in common to top civilian and governmental executives; and Lawrence and Lorsch (1967) have described the two primary functions of directing large, complex organizations which they term differentiation and integration.

Based on the historical perspective of senior command and the scientific basis for leading large organizations, an integrated perspective perhaps can be developed. This approach strives to incorporate both

psychological and organizational theory as well as historical analysis into an eclectic theory of senior command which describes the characteristics, attributes, skills, abilities, and requirements for successful senior commanders.

The disparate disciplines of science and history approach questions of leadership and commandership from very different perspectives. The Army has been inconsistent in the approach which it has recognized as preeminent. During the 1960s and 1970s, the scientific perspective which focused on behavioral and management science was dominant within Army doctrinal and academic circles. Recently the historical approach has gained ascendancy. That this is true was demonstrated in the recent Officer Personnel Management System (OPMS) Study Group Report (1 October 1984) prepared by direction of the Chief of Staff of the Army. When tasked to "study combat leadership and identify the trends and characteristics that should be institutionalized in the development of officers" (LeHardy, 1984, p. v) it was not the Department of Behavioral Sciences and Leadership at West Point which received the assignment, but instead, the Department of History.

However, the problems of defining and understanding senior command are more difficult than simply choosing which of two approaches to adopt. If one truly wishes to understand command at senior levels in all its complexities, one must examine it from many perspectives. This means more than discussions with friends and acquaintances and more than contemplation or introspection. It means reading and integrating the distilled knowledge of many, many experts, both historical and scientific. It also means consideration of the many situational variables which influence the importance and efficacy of the various commandership attributes. As Robert Taylor, former head of the Department of Management, and William Rosenbach, head of the Department of Behavioral Sciences and Leadership at the U.S. Air Force Academy remind us about the study of leadership at all levels:

> If we are serious about the study of leadership, we must shed the notion that meaningful concepts of leadership can only come from within; we must search everywhere for knowledge (Military Leadership, 1984, p. 1).

A review of the historical and scientific literature on senior command might help develop a synthesis which could then serve as a useful source document to assist in the writing of future Army leadership doctrine. Such an integrated view might also aid in the selection,

development and assignment of our most senior officers. In short, the potential benefits of a more complete understanding of the senior commandership process are both many and significant.

Chapter 2

The Meaning of Leadership, Management, and Command

> All the regulations and gold braid in the Pacific Fleet cannot enforce a sailor's devotion. This, each officer in command must earn on his own (Lott, 1964).

THE NEED FOR DEFINITIONS

The starting place for any complex field of inquiry is definitions. Unless definitions are precise and understood at the outset, there is room for a great deal of misunderstanding and dispute. Clearly, words mean different things to different people. One of the primary sources of confusion surrounding the whole field of leadership study is the difficulty associated with defining leadership. Therefore, we will begin with definitions.

There is considerable debate, both within the military and amongst civilian observers concerning the relative dominance of either the leadership or management ethos and the relative merits of each. However, rarely, if ever, do the participants in this debate bother to define precisely what is meant by either leadership or management. It is presumed that these words mean the same things to everyone. This assumption is false. A

cursory reading of the leadership literature reveals a great deal of disagreement concerning the meaning of the term "leadership." Also, the term "commandership" is frequently presumed to mean the same thing as leadership (Gabriel and Savage, 1978). It is imperative, therefore, if one is to build a theory at senior levels of command, that these three concepts, leadership, management, and command be explicitly and exactly defined. Therefore, the following definitions and conceptual distinctions are offered. They will help to dispel the fog of confusion surrounding these terms. These definitions are of personal construction and seem to aid in understanding much of what has been written concerning these important topics.

First, in building definitions it is important to distinguish between leadership and a leader, between management and the manager, between commandership and the commander. In all three cases, the former is a process, the latter is a person. It is not simply pedantic to point out that a process is not a person. Many people fail to comprehend this simple but essential fact. They presume that "leaders only lead, managers only manage, and commanders only command." This, of course, is patently false. Leaders also manage, managers frequently lead, and commanders are expected to do both. The point

is, it is important to consider the processes irrespective of the job title of the positio , for it is only by distinguishing between the process and the person that one can truly understand these concepts.

Confusion concerning these processes and the inability to distinguish between the process and the person has arisen because all three processes are directed toward the same objective - to direct people in organizations to goal attainment. In the Army vernacular, all are directed toward mission accomplishment. But sharing the same objective does not equate to sharing the same activities. In other words, in thinking about these processes, people do not normally differentiate ends and means, or goals and methods. Leadership, management, and commandership are three processes (means and methods) which are directed toward mission accomplishment (ends and goals).

What is desirable is a taxonomy or model which portrays the relationships between the processes of leadership, management, and commandership. Constructing such a model is a difficult task considering that many of the components of these processes cannot be observed or manipulated in the same manner as objects in the physical or biological sciences. Further, any one particular job

position may demand of the incumbent that he perform many functions that are included within the purview of each of the three distinct processes considered. Nevertheless, careful analysis can permit specification of the tasks and functions inherent in each of these processes, as well as a description of the areas of overlap.

The aim of this chapter, then, is to define leadership, management, and commandership by describing the unique aspects and functions of each process and the skills and competencies required to perform each. Additionally, since these processes often have common characteristics or functions, any area of duplication will be described, and tasks that require both leadership and managerial abilities, for example, will be explained. In other words, a model for understanding similarities and differences will be constructed. The value in using a model to portray these relationships rests in the model's ability to organize and simplify a complex body of knowledge and to facilitate not only an analysis of, but also, a way to communicate information about these key roles.

First, the definitions of leadership, management, and commandership shall be presented. Then, in turn, each shall be described and its relationship to the others portrayed.

Leadership -- the process of transmitting to the subordinate the values, attitudes, and beliefs of the leader in such a way that the subordinate identifies with the leader and subsequently internalizes the leader's standards of performance and goals of mission accomplishment.

Management -- a set of analytical activities performed in order to direct, control, integrate, or allocate resources such as time, material, information, or money.

Commandership -- a process of indirect influence which encompasses all aspects of leadership and management; however, the focus of activities is upon the organization as a whole instead of unique individuals or specific resources, and the perspective is one of synthesis and integration instead of analytic cause and effect.

It is appropriate to note here that the U.S. Army doctrinal definition of leadership, as presented in FM 22-100, Military Leadership (1983, p. 44), is "a process by which a soldier influences others to accomplish the mission." This definition is so broad as to encompass all the activities of leadership, management, and commandership as herein defined. This is because the "official" definition describes leadership in terms of

the goals or outcomes produced, that is, mission accomplishment, instead of the method or procedure for producing that outcome. This is akin to saying, "Anything that works is leadership." It is circular reasoning. In a complete definition the process should be made explicit. The following sections attempt to do just that.

THE MEANING OF LEADERSHIP

As we stated above, leadership is the process of transmitting to the subordinate the values, attitudes, and beliefs of the leader in such a way that the subordinate identifies with the leader and subsequently internalizes the leader's standards of performance and goals of mission accomplishment. Warren Bennis, former president of the University of Cincinnatti, and currently at the University of California, expresses this concept in a similar way. Bennis agrees that the inculcation of values is a primary function of the leader. He says,

> The leader must...shape...the "culture of work" - those intangibles that are...so terribly important in governing the way people act, the values and norms that are subtly transmitted to individuals and groups and that tend to create binding and bonding (1984a, p. 182).

The efficacy of this process is dependent upon the quality of the affective relationship between the

subordinate and the leader. Only if the subordinate has positive affect for the leader is he likely to adopt the leader's values and beliefs. Affect means feeling. How does the subordinate feel about his leader? Does he respect him, or is he merely indifferent toward him? Does he feel contempt and loathing for him, or does he love his leader to the extent that he is ready to die for him? It is these emotional, gut-level, inarticulate, and sometimes subconscious feelings of the subordinate for his leader that describe the essence of leadership. Anything that affects the subordinate's feeling for his leader affects that leader's ability to transmit to his subordinate his values as well as the subordinate's willingness to internalize these values.

Contributing most to the leader's ability to inculcate his values in his subordinates are feelings (on the part of the subordinate) of respect, admiration, love, fear, and dependence. These feelings lead to a sense of identification with the leader. At first glance, it may appear that these feelings are mutually exclusive. They are not. It is possible to respect and love a leader, while at the same time to experience feelings of fear and of dependence upon the leader. Thomas E. Cronin, writing in Military Leadership: In

Pursuit of Excellence (1984), describes these paradoxical or seemingly contradictory feelings of the subordinate for the leader. He attests that, "The leader...serves as an attraction in the organization, but psychologically there is also a repulsion to the leader - in part because of dependence on the leader" (p. 198). The subordinate's feelings of love, respect, and fear of his leader enable the leader to inculcate values, attitudes, and beliefs. This leads to identification with the leader and internalization of the leader's standards of performance. Thus, the exercise of leadership depends upon the quality of the affective relationship established between the subordinates and the leader. General Creighton Abrams, one of the Army's few "heros" of the past few decades, agreed. He opined that, "Leadership is a very personal, human endeavor involving personal relationships...among people who grow to trust and like each other" (Taylor, 1983, p. 41). Specifically, the leader inculcates values in the subordinate by controlling the subordinate's feelings for him. This is generally a long-term process but may be accelerated if the subordinate is predisposed to accept the legitimacy and correctness of the views of authority figures.

We shall examine this process of controlling the subordinate's feelings for the leader in more detail, but

first the method and the purpose of the inculcation of values must be examined. As stated previously the leader transmits values, attitudes, and beliefs in such a way that the follower adopts the goals and values of the leader and subsequently internalizes those goals and values as his own. Internalization of the leader's values results from the subordinate's identification with the leader. The subordinate aspires to emulate the leader. The leader becomes an ideal or value symbol to the follower.

This definition of leadership subsumes earlier and more traditional approaches to leadership that focus on the leader as a "role model" or that emphasize the "willing obedience" of the subordinate. If the subordinate aspires to be like his leader and if he has internalized the leader's values and goals, then praise and approval from the leader become tangible evidence that the subordinate has attained desired goals while maintaining his leader's values which have become his own.

Leaders convey their values through both word and deed. When there is a conflict between "espoused" behavior and "actual" behavior, people infer from "actual" behavior what is really important to a leader.

Leaders cannot help but convey their values to their subordinates. Every time they act or fail to act they convey a sense of what is important. The key questions then are, what determines whether or not the subordinate adopts the leader's values as his own?; to what extent will this take place?

Some leaders are better than others at inculcating values in their subordinates, that is, in causing them to value similar things. What makes the difference? Why is it that we understand, believe, are inspired by, and want to follow some leaders, yet feel nothing but resentment and resistance toward others? The answer to these questions focuses on three primary factors which determine how well the leader controls the emotions or sentiments that his subordinates feel for him and his skill in earning their devotion.

The first factor that influences the subordinate's feelings for his leader is the leader's task skills. In other words, is the leader technically and tactically proficient; does he know his job? Subordinates will neither respect nor identify with a leader whom they perceive to be technically or tactically incompetent or who lacks the ability to organize or manage them effectively. (We shall have more to say about management in a later section of this chapter. Suffice it to say at

this point that managerial ability is a specific form of task skill and may be a prerequisite for earning the positive regard of subordinates.) In general, planning, decision making, and technical and tactical skills are all aspects of the general task skills required of a leader in order to earn the respect of subordinates.

The second factor that affects the leader's ability to gain the trust and earn the respect and devotion of subordinates is the leader's interpersonal skills. These interpersonal skills include such behaviors as the abilities to listen empathetically, to be persuasive, to provide interpersonal and performance feedback, to apply rewards equitably, and to respond to the personal needs and problems of his subordinates. Interpersonal skills include communication skills, human relation skills, and counseling skills.

The final factor that determines the affect which the leader's subordinates feel for him and that subsequently determines his ability to control their values, is the leader's demonstrated traits or characteristics. Although trait approaches to the study of leadership have declined in importance since World War I, trait theories are not altogether dead. Subordinates do infer traits in their leaders based on their

observations of the leader's behavior. The perception, or inference, of traits by subordinates has a significant impact on their affective response toward the leader.

Accepting the fact that appropriate leader behavior, as demonstrated in task abilities, interpersonal abilities, and traits, leads to positive subordinate regard for the leader, and accepting that this positive regard leads to identification with the leader and the subsequent adoption of his values, one question still remains: "why are values so important?" As Colonel Dandridge M. Malone (1980) has emphasized in his insightful paper, "X=H," values form the basis for performance standards. A leader who effectively transfers his values to his followers, transfers his performance standards. He ensures that his subordinates do their work with a set of performance standards that they have internalized to guide their actions, and that these performance standards have been transmitted from the leader through his values, to his subordinates who adopt the values as their own. The essence of this leadership process is summarized in Figure 1.

Insert Figure 1 About Here

General Maxwell Taylor (1947) attested to the central role of the soldier's affective feelings for his

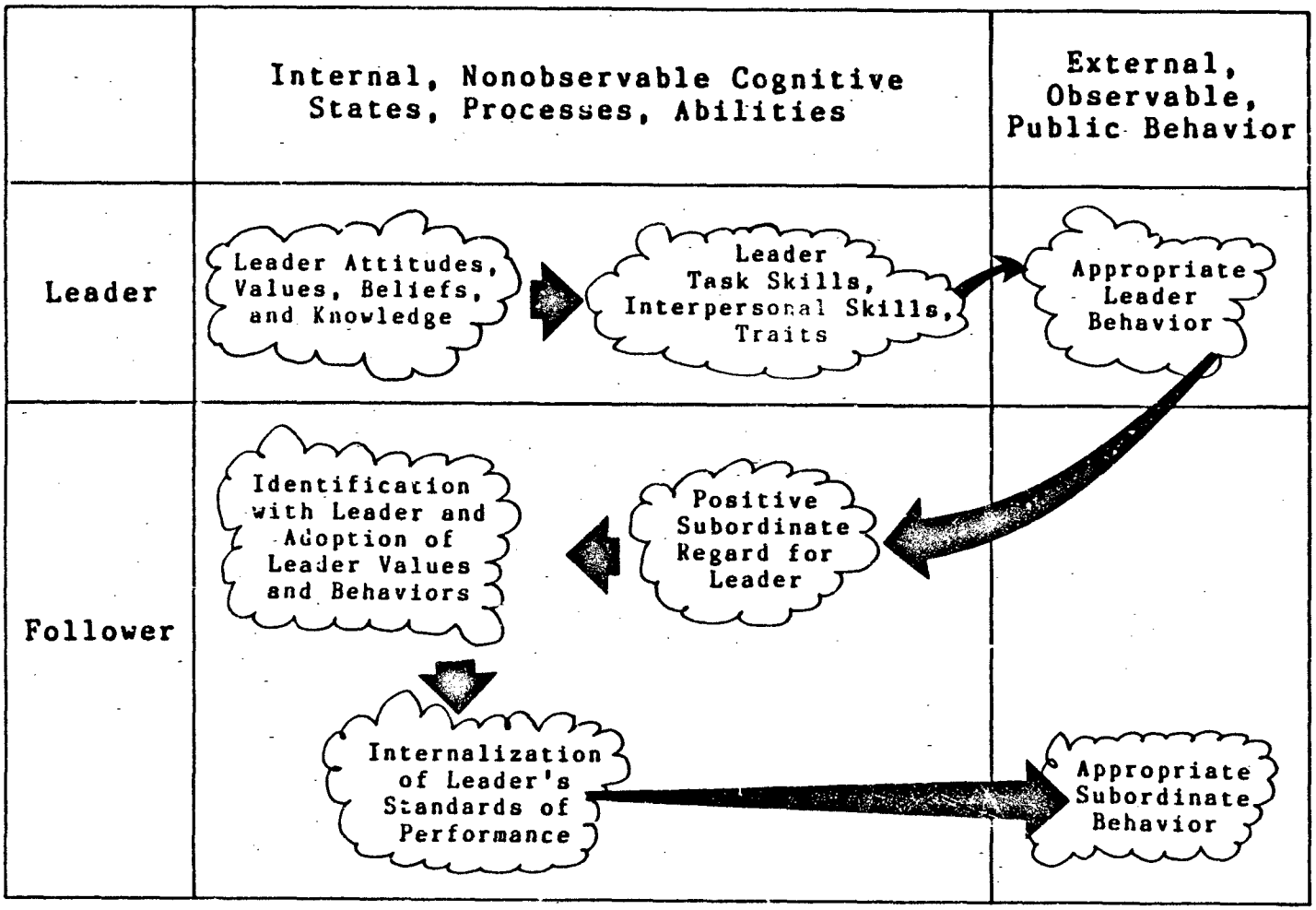

Figure 1. The process of leadership (Zais, 1982b, p. 37).

leader in the leadership dynamic. "A reflective reading of history will show that no man ever rose to military greatness who could not convince his troops that he put them first, above all else."

Similarly, in his tome, Leadership (1978), James MacGregor Burns acknowledges the importance of the affective component of leadership. In this work Burns contrasts "transactional" leadership with "transformational" leadership. The transactional leader operates on an informal contractual basis with his subordinates. In other words, if subordinates do their jobs, don't cause problems for the leader, and help him do well he will, in turn, reward them appropriately. This is a business-like, exchange relationship. It is unemotional. The end result is a "payoff." The result of transformational leadership is different. While there is a payoff, there is more. The subordinate is also "rewarded" by "personal growth" and enhanced self esteem as provided by the transforming leader. The relationship between leader and subordinate is emotional. Whereas, "the former provides only material reward, the latter provides psychological income" (Feinberg & Levinstein, unknown date).

What Leadership Isn't.

One factor which has confused leadership research and garbled leadership literature and doctrine has been the failure to distinguish between the "process" of leadership and the "results" of successful leader or executive performance. Leadership is a process and refers to the interpersonal dynamic between the leader and the led, whereas organizational or unit performance is an outcome of a number of activities, processes, and influences, one of which happens to be leadership. Leadership is not synonymous with performance. When one distinguishes between the leadership process and the results of leadership one can understand how it is possible to be successful in some organizational or executive roles yet be a poor leader. Conversely, it is possible for an individual with exceptional leadership ability to suffer repeated failure and defeat. This view of the relationship between the exercise of leadership and unit performance is shared by Jeffrey Pfeffer, Professor of Organizational Behavior at the Graduate School of Business, Stanford University. According to Pfeffer,

> Many factors that may affect organizational performance are outside a leader's control, even if he or she were to have complete discretion over major areas of organizational decisions... While the leader may react to

> contingencies as they arise, or may be better or worse as forecaster, in accounting for organizational outcomes, he...may account for relatively little compared to external factors (1977, p. 107).

In most cases, however, it is true that effective leadership usually leads to, or at least contributes to, successful organizational performance. However, people tend to assume that leadership and successful performance are one and the same thing. More commonly, they make the mistake of assuming that measures of success are the same as measures of leadership. As Pfeffer has stated, success or performance in organizational settings is a function of many things other than leadership skills. For example, the leader's managerial abilities, the characteristics of his subordinates, his relationship with his superior, as well as external factors in the organization's environment, aside from any leadership ability, influence organizational performance. If one thing is clear conceptually, it is that measures of organization performance are not the same as measures of leadership, not withstanding the fact that these two variables are correlated, and that leadership ability does improve organizational performance, or at least it increases the likelihood that organizational performance will be enhanced.

If one assumes that leader performance and leadership are the same thing, then one must also assume that generals who have lost battles, campaigns, or wars lacked leadership ability. Does one presume, for example, that Rommel was a poor leader because he ultimately "lost" in North Africa? An individual can be extremely successful in the leadership process of inculcating values in subordinates and their subsequent adoption of the leader's standards of performance, while at the same time he may be unsuccessful according to criteria used for measuring organization performance, since leadership is only one of many factors which determines that performance.

While leadership ability does increase the likelihood of success, the opposite is also true: success increases leadership ability. This is true because success does two things that enhance the leader's ability to inculcate his values in subordinates. First, subordinates attribute various positive characteristics to leaders who are successful. These attributions increase the respect which the subordinates accord their leader. As previously stated, respect is an important affective component of the soldier's feeling for his leader; it increases the acceptability of the leader's values and the likelihood that these values will be

adopted and internalized by the soldier. Second, success alters or reinforces the leader's perception of himself and his own ability. It increases his self-confidence. Self-confidence is an important trait because subordinates can sense, instinctively and subconsciously, whether or not their leaders possess or lack confidence. It is extremely difficult for a leader to inspire respect and confidence in his subordinates when he himself lacks this confidence.

In addition to success, another aspect of organizational performance which is often confused with leadership is compliance. Compliance is not the result of leadership. Compliance results when the subordinate accepts the threat of punishment as the determinant of his behavior instead of a set of standards based on his internalization of the leader's values. Compliance is less effective than leadership as a device for controlling subordinate behavior because as soon as the sanctions or threats of sanctions are withdrawn the desired subordinate behavior ceases. It is only when the motivation for the subordinate's behavior is internal that he will function in the desired manner, regardless of whether or not he is supervised. Thus, internalization of the leader's values and the leader's

standards of performance reduces, to a large degree, the leader's need to direct, control, supervise, inspect, evaluate, reward, or punish. The leader doesn't need to do these things to the extent that he might otherwise because these functions are redundant. In other words, the functions of directing, controlling, and supervising are designed to insure that the leader's standards of performance are met. But when the leader's values are transposed to the subordinate's standards of performance, the leader can devote much more of his time and energies to functions other than supervisory activities. In sum, the effective exercise of leadership can reduce the need to direct, control, and supervise subordinates' activities. One anonymous writer summarized this relationship as, "Leadership is discipline which makes punishment unnecessary. Discipline is punishment that makes leadership unnecessary." Major General John M. Schofield's "Definition of Discipline," delivered in an address to the Corps of Cadets at West Point in 1876, dramatically illustrates the difference between leadership and coercion, and the central role that the subordinate's feelings for his leader play in the leadership process.

> The discipline which makes the soldiers of a free country reliable in battle is not to be gained by harsh or tyrannical treatment. On

> the contrary, such treatment is far more likely to destroy than to make an Army. It is possible to impart instruction and to give commands in such a manner and such a tone of voice as to inspire in the soldier no feeling but an intense desire to obey, while the opposite manner and tone of voice cannot fail to excite strong resentment and a desire to disobey. The one mode or the other of dealing with subordinates springs from a corresponding spirit in the breast of the commander. He who feels the respect which is due to others cannot fail to inspire in them regard for himself, while he who feels, and hence manifests disrespect toward others, especially his inferiors, cannot fail to inspire hatred against himself (United States Military Academy, 1965, p. 114).

THE MEANING OF MANAGEMENT

As the former Chief of Staff of the Army, General E.C. Meyer (1980) has told us,

> Leadership and management are neither synonymous nor interchangeable. Clearly good civilian managers must lead, and good military leaders must manage. Both qualities are essential to success.

One of the primary reasons for the confusion about what does or does not constitute leadership is the failure to distinguish conceptually between the process of leading and the process of managing. These are, in fact, separate processes. Most people who have served under a revered leader intuitively know there is a difference. When asked to be specific about this difference, however, they find it difficult and confusing. The difficulty of separating the functions of

leadership and management does not deny their distinctiveness, however.

While leadership focuses on the affective relationship between the leader and the led, management focuses on the cognitive aspects of behavior in such activities as planning, organizing, or budgeting. Management, then, can be defined as a set of activities or behaviors performed by an individual in order to direct, control, integrate, or allocate resources. These management behaviors or functions include, but are not limited to, such activities as planning, decision making, scheduling, budgeting, and setting objectives. These are cognitive, intellectual, purposeful, and at most times, rational activities. Management is objective and analytical, in contrast to leadership, which is value-laden, affective, and emotional. In essence, time, material, information, and money are managed. People, as a category of thing or as objects, are also managed. This is the function, for example, of the U.S. Army Military Personnel Center (MILPERCEN). However, people as individuals are led. This is the function of the individual and personal leader.

The focus of management activities is upon quantitatively describing how organizational goals and

activities should be carried out. As Peter F. Drucker (1974), the noted American authority on the science of management, has stated, management, is intended to "substitute certainty for work, knowledge for judgment, hard facts for experience." A primary approach adopted by those intent on systematizing this activity is "operations research." A research mode related to that methodology is known as "systems analysis." Basically, it employs models drawn from mathematics, statistics, and economics, relating the independent variable of some organizational resource, such as bombers, missiles or submarines, to the dependent variable of organizational efficiency, such as nuclear deterrent capability. As operations research/systems analysis (ORSA) was being developed, computer technology was also rapidly evolving; subsequently, management techniques were greatly assisted by advances in computer knowledge (Clement and Ayres, 1976). In addition to ORSA analysis, management emphasizes the technical routine application of various types of organizational controls, including cost accounting, the maintenance of inventories, the payment of wages and salaries, maintenance scheduling, the preparation of budgets, quality control, time management, the definition or analysis of jobs, procedural analysis and the like. PERT (Program Evaluation and Review

Technique) is an example of a control or analysis system that has been widely used in the Army.

THE LEADERSHIP / MANAGEMENT OVERLAP

The fact that leadership and management can be conceptualized as two separate types of activities, one affective or emotional, the other cognitive or intellectual, does not imply that there are no activities which combine aspects of both leadership and management. On the contrary, many activities traditionally associated with leadership and management require both leadership and management skills. These activities constitute the overlap between leadership and management and include such functions as supervising, directing, and controlling subordinates. In other words, supervising, directing, and controlling subordinates requires the leader/manager to establish an appropriate emotional relationship between the follower and himself while at the same time organizing and directing the subordinate's work for the most effective and efficient method of task accomplishment. These activities, therefore, incorporate demands upon the leader/manager to establish the necessary emotional bonds with subordinates and to employ managerial techniques involved in planning and organizing

which remain independent from any interpersonal interaction.

In a sense, a description of the functions of the leadership/management overlap entails a loss of specificity regarding the activities and tasks actually performed by the individual. The terms used to describe activities constituting this overlap - for example, "directing," "controlling," or "supervising" are general, or vague, and disguise the fact that the activity is actually a composite of various sub-tasks or separate activities. These separate activities are, in fact, leadership activities and management activities. Thus, the individual engaged in "supervision" must rely on both his ability to affect the process depicted in Figure 1 (leadership) and on his ability to allocate time and to structure activities (management). It is these functions which require both management skills and leadership skills that have been the source of the never-ending debate about what constitutes leadership versus what constitutes management; simply put, many complex activities are combinations of both.

One of the primary functions inherent in the leadership/management overlap is controlling. Controlling is described as a sequence of three major activities: establishing standards, measuring results,

and correcting deviations (Huse, 1979). "In the literature relating to organizational behavior, there is ambiguity in the use of the word control...because to control can also mean to direct. Precisely defined, control refers solely to the task of insuring that activities are producing desired results" (Giblioni and Bedian, 1974). It is clear that establishing standards and measuring results require the cognitive, managerial skills of establishing objectives, planning, and decision making. But an inherent aspect of correcting deviations from standards involves directing, which includes leading, developing, training, and motivating subordinates (Huse, 1979). In other words, directing is the affective or leadership component of controlling.

An activity closely related to controlling and one that also represents a blending of leadership and management, is supervision. Like control, supervision is concerned with insuring that standards of performance are met. Supervision, however, has a larger interpersonal, affective component than does directing. The cognitive or managerial aspects of supervision include such behaviors as giving instructions or information as well as analyzing performance. The affective or leadership aspects of supervision consist of such functions as

rewarding or punishing performance and facilitating group cooperation or effort (Brown and Moberg, 1980). Nevertheless, even the component skills or functions of supervision, such as rewarding performance, or providing information, are neither purely affective nor purely cognitive: they are a fusion of both. This overlap between leadership and management functions is portrayed in Figure 2.

Insert Figure 2 About Here

Given the overlap of leadership and management skills, the task of analyzing a general function such as controlling, directing, or supervising into its component affective and cognitive sub-tasks is akin to unraveling the Gordian Knot. Suffice it to say that those activities comprising the juncture of leadership and management are required functions in any large, formal organization and are practiced in varying degrees, depending upon the specific requirements of the situation. Because the skills required for effective supervision vary so greatly from organization to organization, and even from job to job within the same organization, it is perhaps most fruitful to focus analysis efforts on those generic supervising skills

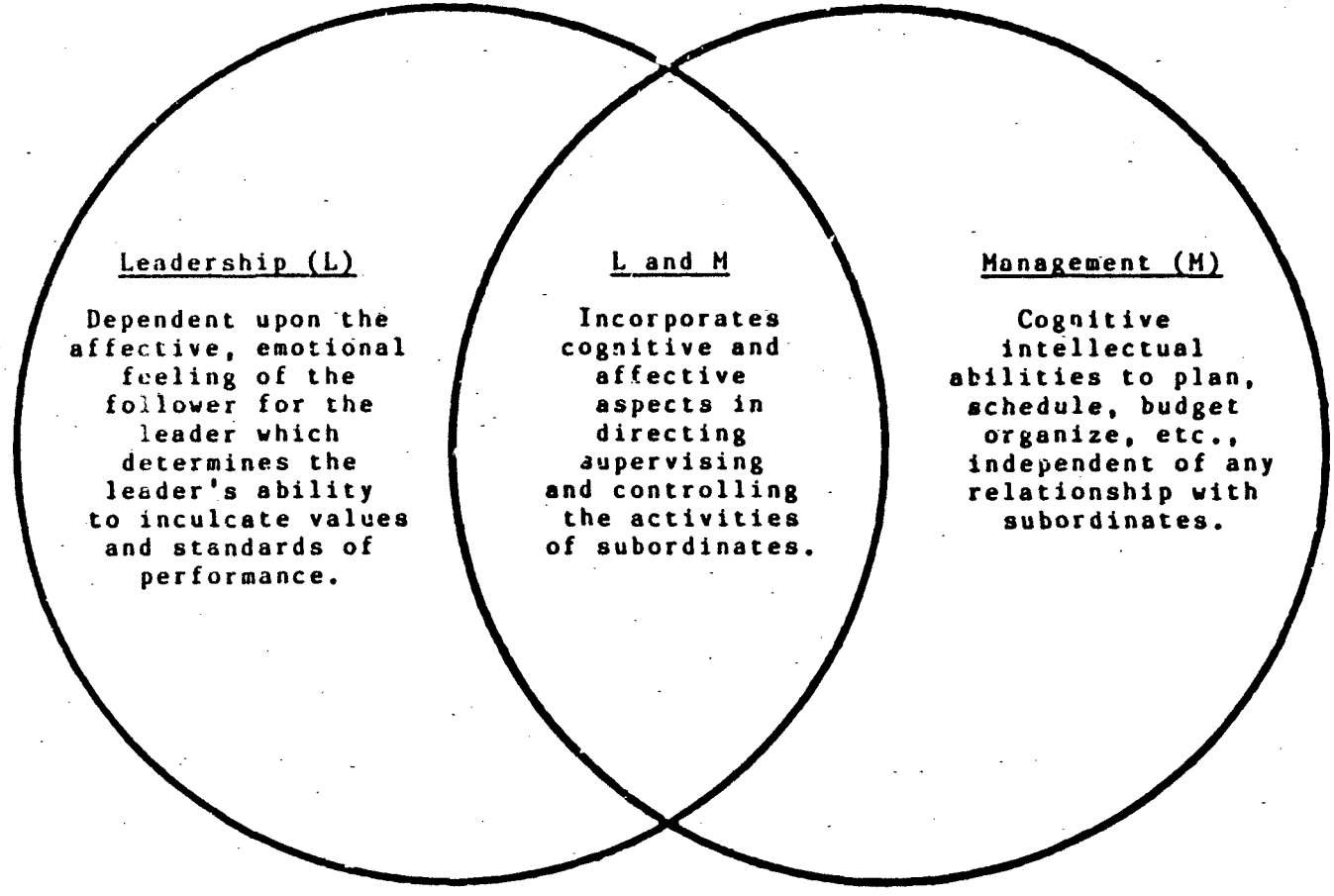

Figure 2. Leadership and management as separate domains and the region of overlap including aspects of both (Zais, 1982a, p. 53).

(e.g. motivating) which tend to apply to most supervising situations.

COMMANDERSHIP

Leadership entails the inculcation and modeling of individual attitudes, values, and beliefs, and relies on the subsequent adoption and internalization of standards of performance by the subordinate. Management focuses on the manipulation and control of resources such as time, money, information, energy, and people as objects. Commandership can be defined as a process of indirect influence which encompasses all the functions of both leadership and management; however, the focus of activities is upon the organization as a whole instead of unique individuals or specific resources, and the perspective is one of synthesis and integration instead of analytic cause and effect. Commanders direct the activities of large, complex, military organizations through the formulation of goals and missions and the integration of diverse and competing subsystems to obtain long term performance results. According to Leadership at Senior Levels of Command, "At senior levels, the

nander leads units rather than individuals, and his efforts are directed toward the maintenance and direction

of his command as a whole system of activities" (1968, p. 3). In addition to requiring leadership and management skills, commandership, or in civilian terms, executiveship, demands additional skills and abilities. Commandership is required because of the complexity of issues and organizational systems with which the individual must contend. Higher ranks in the organizational hierarchy require a broader perspective and the performance of other tasks in addition to the exercise of leadership and management skills. Accordingly, commandership subsumes, but is not limited to, all of the leadership and management functions. Figure 3 portrays this relationship.

Insert Figure 3 About Here

This view of the differences between leadership, management, and commandership was expressed by Professor William Turcotte, Chairman of the Defense Economics and Decision Making Department at the U.S. Naval War College. He simply uses the term "category one" leadership to describe leadership as we have defined it and "category two" leadership to refer to command. He says,

> The first categorization [leadership] is one-on-one or small group leadership, most often associated with combat units... It evokes images of a personal impact on an immediate

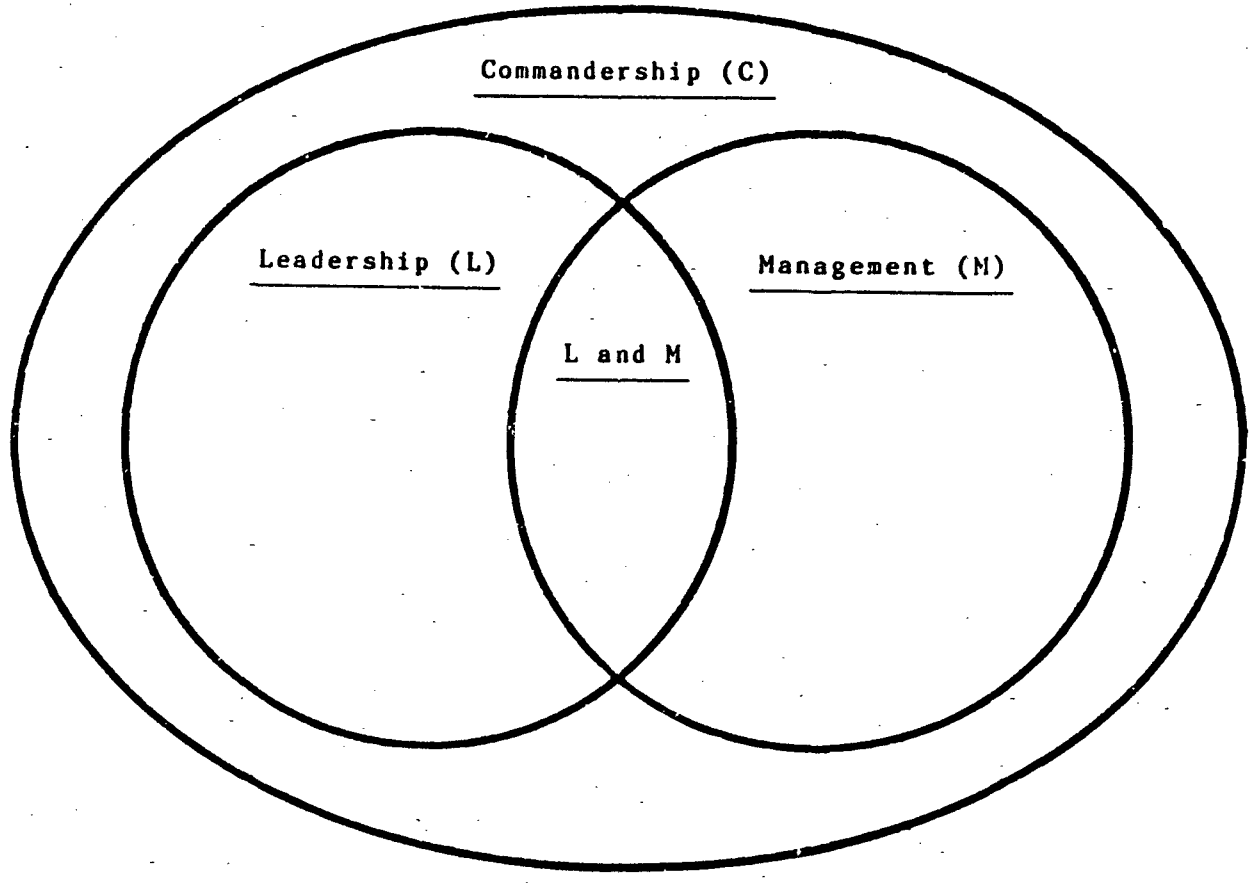

Figure 3. Commandership and its relationship to leadership and management. Commandership includes all aspects of leadership and management. However, the commander's focus is on the organization as a whole instead of individuals and things. The perspective of commandership shifts from analytic cause-effect to one of synthesis and integration. The commander must contend with increasingly complex issues and organizational [illegible] (Zais, 1982a, p. 53).

> circle of associates... The second...category - executive-level leadership [commandership] - is necessary for larger organizations. Many differences separate these two leadership types, but the major one is that in larger organizations, the leader must project the required goals and organizational climate for their attainment through several hierarchical levels. These organizational structures and behaviors are less well-defined; indeed they are often ambiguous. Most members of these organizations rarely are in personal touch with the executive. The [commander]...must take into account the various organizational filters, the communications linkages and misinterpretations, sometimes deliberate, of desired goals and priorities. He initiates the structure and process, projecting the desired goals in a congruent way. This structure and process resembles management control and comes close to defining the point at which executive leadership and management practices become inexorably intertwined (author's emphasis) (pp. 47-48).

In other words, Turcotte is recognizing both the distinctions between leadership and management and understands that the senior commander or executive must be skilled in both as well as being responsible for the accomplishment of other, more complex, tasks.

For the purpose of this discussion, the requirement for commandership is considered to begin primarily at company level, becoming ever more important at higher organizational levels. Battalion and brigade are intermediate levels of command. Senior command is defined as beginning at division and progressing through corps levels and higher. In general, the higher the

organizational level and the more complex the organization and the issues which confront it, the greater the demands for commandership and the more that senior command differs from lower level command.

In essence, this paper is concerned with Major General through four-star rank, that small segment of the officer corps which must assume the principal responsibility for directing that complex organization, the U.S. Army. It is to these individuals that the rest of the Army looks for guidance and example, for senior commandership. It is at this level that organizational units shift from being relatively simple and self contained entities to being extremely complex systems with multiple external influences and competing internal demands.

Chapter 3

Historical Perspectives of Senior Command

> The personality of the general is indispensable; he is the head, he is the all of an army. The Gauls were not conquered by the Roman legions, but by Caesar. It was not before the Carthaginian soldiers that Rome was made to tremble, but before Hannibal. It was not the Macedonian phalanx which penetrated to India, but Alexander. It was not the French Army which reached the Weser and the Inn, it was Turenne. Prussia was not defended for seven years against the three most formidable European Powers by the Prussian soldiers, but by Frederick the Great.
>
> Attributed to Napoleon I, 1769-1821
> (quoted by Foch in Percepts)

Having described the differences between leadership, management, and commandership, we shall now turn our focus specifically to the question at hand, "What are the requirements for senior command?" In this chapter we shall examine the historical evidence which describes what these abilities and attributes actually are, for, "historical examples clarify everything and also provide the best kind of proof in the empirical sciences. This is particularly true of the art of war" (Clausewitz, 1832, p. 170). The preponderance of this historical evidence will draw upon the ideas of military theorists such as Clausewitz, as well as the testimony of high commanders such as Napoleon and Wavell.

For ease of understanding and in order to establish a framework for analysis, these abilities and attributes which have been identified as essential for successful performance at senior levels of command can be grouped into four major areas: 1) cognitive ability, 2) character and temperament, 3) knowledge and experience, and 4) skills and abilities. These shall be examined in the order listed. Clearly these categories of attributes are interrelated. For example, one's intellectual ability influences his knowledge; knowledge has an impact on one's skills and abilities; one's abilities will influence his personality or character and temperament, and so on. However, these categories are useful and facilitate analysis of senior commander attributes and hence will be employed.

In describing senior commanders we are, of course, describing generals. We shall soon see that the noted British commander, Wavell, hit the mark when he asserted:

> The many and contrasted qualities that a general must have rightly gives an impression of the great field of activity that generalship covers and the variety of the situations in which it has to deal, and the need for adaptability in the make-up of a general (1941, p. 41).

COGNITIVE ABILITY

> The principle task of the general is mental, involving large projects and major arrangements.
> Frederick the Great

The preceding quotation from Frederick's Instructions for His Generals, 1747 (Heinl, p. 130), summarizes the belief of a large number of generals and military theoriticians that intelligence and cognitive ability are key ingredients in the make-up of successful senior commanders. It is important to establish at the outset, however, that cognitive ability is not the same thing as is commonly understood by the term intelligence quotient, or IQ. Cognitive ability is a much broader concept and includes many dimensions of mental ability that are not included under the concept of IQ. Fundamentally, IQ is merely a measure of reading skills and mathematical reasoning ability (Horn, 1978a and 1978b). The term cognitive ability, as used in this study, includes IQ as well as such concepts as political astuteness, plain common sense, an understanding of the effects of terrain, and a sense of timing. The types of cognitive ability which have been identified in the historical literature as being important in senior command can be categorized as: a) intelligence, b) creativity, and c) coup d'oeil.

Intelligence

Marshall Maurice de Saxe wrote in 1732 (Mes Reveries) that intelligence is one of the three essential requirements for generalship (Heinl, p. 126). Clausewitz, agreed. He said that powers of intellect provide the medium or solidifying element for all the other attributes of senior command. It is important, he said, because in the senior commander,

> A sensitive and discriminating judgment is called for; a skilled intelligence to scent out the truth. Average intelligence may recognize the truth occasionally, and exceptional courage may now and then retrieve a blunder; but usually intellectual inadequacy will be shown up by indifferent achievement... The difficulty [of intellectual activity] increases with every step up the ladder; and at the top - the position of commander in chief -it becomes the most extreme to which the mind can be subjected (1832, pp. 101 & 146).

Further, he added, intelligence makes a vital contribution in every endeavor of the superior senior commander. In summarizing his chapter on military genius, Clausewitz concluded that:

> War, though it may appear to be uncomplicated, cannot be waged with distinction except by men of outstanding intellect... Even junior positions of command require outstanding intellectual qualities for outstanding achievement, and...the standard rises with every step... Bonaparte rightly said in this connection that many of the decisions faced by the commander-in-chief resemble mathematical problems worthy of the gifts of a Newton or an Euler. What [senior command] requires in the way of higher intellectual gifts is a sense of

> unity and a power of judgment raised to a marvelous pitch of vision (1832, pp. 110-2).

Creativity

Several noted authorities have described the role of creativity in the making of a general. As early as 400 BC, Socrates, noted that, "The general...must have imagination to originate plans and the practical sense...to carry them through" (Heinl, p. 128). According to Clausewitz, "the higher the rank, the more the problems multiply, reaching their highest point in the supreme commander. At this level, almost all solutions must be left to imaginative intellect" (emphasis added) (1832, p. 140). Field Marshal Baron Colmar von der Glotz, Chief of the German General Staff, wrote in his book, A Nation in Arms, in 1906, that, "One of the most important talents of a general we would call that of a 'creative mind'" (Fuller, 1936, p. 10).

Writing between the World Wars, J.F.C. Fuller, the renowned military theoretician and developer of armored doctrine, wrote that one of the three essential requirements for the senior commander is a creative intellect. This creativity enables the general to surprise his enemy and thus render him impotent. Without this creative ability the senior commander will be tactically deficient, because:

> Originally, not conventionality, is one of the main pillars of generalship. To do something that the enemy does not expect, is not prepared for, something which will surprise him and disarm him morally. To be always thinking ahead and to be always peeping around corners. To spy out the soul of one's adversary, and to act in a manner which will astonish and bewilder him, this is generalship,... this is the foundation of success (1936, p. 10).

In 1923, writing in The World Crisis, Winston Churchill described this same ability to befuddle one's enemy as essential for a great general. He said:

> There is required for the composition of a great commander not only massive common sense and reasoning power, not only imagination, but also an element of legerdemain, an original and sinister touch, which leaves the enemy puzzled as well as beaten (Heinl, p. 146).

Martin van Creveld, in an historical survey of command in battle, described how Napoleon combined both creativity and intelligence and how he was able to use these mental gifts.

> Intellectually, Napoleon's most distinctive quality may well have been his vivid imagination which... enabled him to envisage things as they would be after this or that action were carried out. To this he joined a formidable capacity for calculation which...enabled him to accurately predict the location of a decisive battle several weeks before it took place (1984, p. 63).

Finally, S.L.A. Marshall (1966) lists "creative intelligence" as one of the three prerequisites for the successful exercise of high command.

Coup d'Oeil

Coup d'oeil is a French term that refers to intuition or the "inward eye." According to Clausewitz, another requirement of the senior commander is the possession of coup d'oeil. It allows "the quick recognition of a truth that the mind would ordinarily miss or would perceive only after long study and reflection" (1832, p. 102). The reason coup d'oeil is essential, said Clausewitz, is because it facilitates accurate tactical and strategic decision making in the midst of the confusion and uncertainty of battle.

A similar notion was expressed by Field Marshall Montgomery in his memoirs.

> The acid test of an officer who aspires to high command is his ability to be able to grasp quickly the essentials of a military problem, to decide rapidly what he will do, to make it quite clear to all concerned what he intends to achieve and how he will do it, and then to see that his subordinate commanders get on with the job (1958, p. xxi).

Other Attributes

We have described the historical evidence for the first necessary, but not sufficient, requirement for effective performance at senior levels of command, cognitive ability. Clearly, intelligence and creativity are not the only requirements which historical sources identify as essential for high command. There are many

other attributes as well. As mentioned, to facilitate analysis, all these other attributes have been grouped into three broad categories, a) character and temperament, b) knowledge and experience, and c) skills and ability. These remaining categories correspond to the taxonomy of attributes developed by the late Boyd Mac Harris, the author of the Army's current company level leadership manual, FM 22-100, Military Leadership (1984). The correspondence is as portrayed below:

Zais's Attributes	Harris's Attributes
Character and Temperament	Be
Knowledge and Experience	Know
Skills and Abilities	Do

In other words, Harris's manual describes what the squad, platoon, and company level leader must be, know, and do in order to be successful.

Separating the effects of cognitive ability from each of the above three categories of leader attributes is extremely difficult, if not impossible. For example, one might logically consider cognitive ability to be an integral part of one's character and temperament in that it shapes how one views the world and consequently significantly influences his personality. Conversely, one might argue that cognitive ability is an inherent part of skills and abilities and that without the requisite mental ability one could hardly accomplish anything. It is also true that one can not acquire

sufficient knowledge to direct complex organizations in a constantly changing environment without a high degree of cognitive ability. In short, cognitive ability is inextricably intertwined with all three categories of leader attributes, a) character and temperament, b) knowledge and experience, and c) skills and abilities.

As we have already discussed, division, corps, and army level commanders must know and do things differently from company level leaders, that is, they must have different knowledge and experience as well as skills and abilities. However, it is less obvious that the requirements for character and temperament differ as well. It is, therefore, appropriate that we should first turn to an examination of what the senior commander must be, that is, his character and temperament.

CHARACTER AND TEMPERAMENT

> The character of the man is above all other requisites in a commander-in-chief.
>
> Jomini
> Precis de L'Art de la Guerre, 1838
> Heinl, p. 62

Problems of Definition and Evaluation

In discussing leader characteristics and temperament one is tempted to call these "traits." There is a reluctance to do so for a number of reasons. First,

trait theories of leadership have not proven terribly useful and scientific research has not consistently shown which specific traits are important. Further, this research has not systematically investigated which traits were appropriate or necessary in specified circumstances (Bass, 1981, pp. 43-93). In other words, research concerning trait theories of leadership has tended to be based on the assumption that "a leader is a leader is a leader." This research, generally, has not taken into account the fact that the "traits" required of the leader of an insurance sales team might be vastly different from the traits required of the leader of an armored division in combat. As a result, trait theories of leadership have partially fallen into disrepute.

A second problem with calling characteristics and temperament "traits" is that the term trait is too broad. It can refer to other attributes such as intellectual ability, or physical stature. For these reasons, character and temperament are more appropriate descriptors than the term traits and shall consistently be used throughout this paper.

It is critical to recognize, however, two important conceptual distinctions concerning character and temperament. First, character and temperament are never seen; they are only inferred. For example, one can never see boldness, one can only see actions on the part of a

commander which leads one to believe he is bold. Another observer of the same actions on the part of the commander may infer that he is rash or doesn't understand the risks inherent in his actions. Boldness implies confidence in the successful outcome of an action about which others are uncertain, or a willingness to take a calculated risk when others should be less willing to do so. Thus, in attributing boldness, or any other aspect of character or temperament, to a commander, one must assume something about his motivation and thought process. However, motivation and thought processes are always unseen. And even when describing their own motivations, after the fact, research has shown that people have a startling lack of insight into their own analytical and thought processes. In short, in ascribing characteristics to senior commanders and describing their temperament we are always making inferences based on behaviors. Many times these inferences will be correct. Often they are wrong.

The second fact one must bear in mind when considering character and temperament is that the behaviors which form the basis for inferences about character and temperament are not consistent. They change from situation to situation. For example, a general who appears undaunted and unperturbed in the face of enemy fire or artillery may have an abject horror of

riding in low flying helicopters. Is he courageous or not? Another, more controversial, example concerns the general who assiduously adheres to high standards of truthfulness and honesty - yet keeps a mistress while at the same time professing devotion to and love of his wife. Is he ethical? Is he consistent? It might have been instructive to have been able to ask General Eisenhower this question during World War II. A more vivid example of trait inconsistency involved Nazi officers administering the Dachau death camp whose sensitivity brought them to tears of emotion listening to Mozart and Bach played by a Jewish orchestra, while outside thousands were being mercilessly exterminated. Were these sensitive officers?

Behaviors, which form the basis for inferences concerning character, are inconsistent in another way. Not only are they inconsistent in different situations, but behaviors are inconsistent at different times as well. For example, a senior commander who appears the acme of determination in one battle, can, on another day and another battle, fall victim to indecision and pusillanimity. Is he decisive? The answer to such questions is that some people are more consistent in their behaviors than others. When a commander consistently exhibits similar behaviors in similar

situations, throughout time, then observers infer characteristics or temperament. It is then that the commander is said to be decisive, ethical, or courageous, as the case may be.

In spite of these problems in describing the characteristics and temperament of senior leaders, we shall proceed in the belief that people do have patterns of behavior and unique personalities which form the basis for what we infer about who they are, and why they act as they do. As stated, we shall call these dimensions of personality, character and temperament. We now try to answer the question, "What aspects of character are required of the senior commander?"

Courage

Courage has consistently been identified by a large number of authors as a vital prerequisite to generalship. Marshal Maurice de Saxe in his book Mes Reveries (1732) stated that in his image of a commanding general, "The first of all qualities is Courage. Without this the others are of little value, since they cannot be used" (Heinl, p. 126). In 1831, Napoleon stated in his Maxims of War that, "The only true wisdom in a general is a determined courage" (Heinl, 1966, p. 131). In the same work, Napoleon further stated that courage is best when

combined with intelligence, a previously identified requirement for generalship. He said:

> It is exceptional and difficult to find in one man all the qualities necessary for a great general. What is most desirable, and which instantly sets a man apart, is that his intelligence or talent, are balanced by his character or courage (Heinl, p. 127).

Nor was Napoleon the first to recognize the need for the courage of the general to be tempered by his intellect. In the 9th century the Chinese writer Tu Wu saw that, "A general who is stupid and courageous is a calamity" (Heinl, p. 126).

According to Clausewitz, "Courage is the soldier's first requirement" (1832, p. 101) from the lowest grenadier to the commander-in-chief. He said that there are two kinds of courage, "...courage in the face of personal danger and courage to accept responsibility." Both are essential for the senior commander.

Another interpreter of Napoleon, the French military theoretician, Jomini, echoed Clausewitz's sentiments concerning the vital nature of courage in a general. In his Principles of the Art of War, published in 1838, he stated:

> The most essential qualities of a general will always be: first, a high moral courage, capable of great resolution; second, a physical courage which takes no account of danger. His scientific or military acquirements are secondary to these (Heinl, p. 127).

J.F.C. Fuller saw courage as the predominate requirement for senior level leadership, for "without...courage there can be no true generalship" (1936, p. 4). He was inspired of course, by what he perceived as a despicable lack of courage displayed by the senior commanders of his day. The new role of the World War I general which kept him safely to the rear, far from danger and away from battle, was without historical precedent, he said, and would lead to the demise of true generalship.

> On the modern battlefield death beats one tune to the soldier, and frequently the modern general, out of sight of his baton, beats another. No single of the great warriors of past ages has dared be so presumptuous... Should the general consistently live outside the realm of danger, then, though he may show high moral courage in making decisions, by his never being called upon to breathe the atmosphere of danger his men are breathing [his vision] will become blurred, and he will seldom experience the moral influences his men are experiencing. But it is the influence of his courage upon the hearts of his men in which the main deficit will exist. It is his personality which will suffer - his prestige... Without the personal contact of the commander with his men... enthusiasm cannot be roused and heroism cannot be created (1936, pp. 9-10).

Like Jomini, Wavell also made the distinction between physical courage and moral courage and asserted that both were essential for the senior commander. He said,

> Courage, physical and moral, a general undoubtedly must have... Physical courage is

> not so essential a factor in reaching high rank as in the old days of close-range fighting, but it still is of very considerable importance today in determining the degree of risk a commander will take to see for himself what is going on...(1939, p. 42).

Finally, Generals Matthew B. Ridgway (1966, pp. 40-43) and S.L.A. Marshall (1975, p. 40) both list courage as one of the three prerequisites for senior command.

Presence of Mind

A concept closely related to courage is what Clausewitz calls "presence of mind." This concept connotes the ability to remain calm and dispassionate during the heat of battle, in the midst of confusion and disorder. This is essential for the general who, by his action or inaction, controls the lives and destiny of tens of thousands of men. Lessor men might be overwhelmed by the gravity of the situation, by the weight of his responsibility, and by the chaos which characterizes battle. The senior commander can not permit this loss of control of his analytical and reasoning processes. This was recognized as early as 1740 by the Italian Count de Montecucculi who wrote in his Commentaries on War,

> Not to be anxious; to be always cool; to avoid confusion in his commands; never to change countenance; to give his orders in the midst of battle with as much composure as if he were perfectly at ease. These are the proofs of valor in a general (Heinl, p. 130).

Nearly one hundred years later Napoleon expressed the same idea in his Maxims of War. He said,

> The first qualification in a general is a cool head -that is, a head which receives accurate impressions, and estimates things and objects at their real value. He must not allow himself to be elated by good news, or depressed by bad (Heinl, p. 131).

According to Clausewitz, presence of mind is related to both coup d'oeil and intelligence because "presence of mind" indicates "an increased capacity to deal with the unexpected," and refers to "the speed and immediacy of the help provided by the intellect" (1832. pp. 10-43). This concept is very similar to what Clausewitz called strength of mind, "the ability to keep one's head at times of exceptional stress and violent emotion" (1832, p. 105).

Boldness

Also related to the concept of courage, particularly moral courage, is the notion of boldness. According to Clausewitz, boldness is indispensable for the ultimate success of the senior combat commander. It is, he said, "...[the] first prerequisite of the great military leader... A soldier, whether drummer boy or general, can possess no nobler quality" (1832, p. 190-2). Boldness in the higher ranks, he added, must be tempered by the gifts of intelligence.

> The higher up the chain of command, the greater is the need for boldness to be supported by a reflective mind... Boldness governed by superior intellect is the mark of a hero. [However], the power of various emotions is sharply reduced by the intervention of lucid thought and, more, by self control. Consequently, boldness grows less common in the higher ranks (Clausewitz's emphasis). Nearly every general known to us from history as mediocre, even vacillating, was noted for dash and determination as a junior officer.... How much of this quality remains by the time he reaches senior rank, after training and experience have affected and modified it, is another question. The greater the extent to which it is retained, the greater the range of his genius (1832, pp. 190-2).

According to the British General, Sir Archibald Wavell, Napoleon felt similarly about the necessity for boldness in his senior military commanders. In an address to the Sandhurst cadets in 1941, titled "Generals and Generalship," Wavell stated:

> Napoleon always asked if a general was "lucky." What he really meant was "was he bold?" A bold general may be lucky but no general can be lucky unless he is bold (1941, p. 43).

Strength of Will

Clausewitz claimed that strength of will characterizes every man of military genius. This is often referred to by such terms as "energy, firmness, staunchness, emotional balance, and strength of character." According to Clausewitz, strength of will is the force which resists

> the ebbing of moral and physical strength, of the heart-rending spectacle of the dead and wounded, that the commander has to withstand - first in himself, and then in all those who, directly or indirectly, have entrusted him with their thoughts and feelings, hopes and fears. As each man's strength gives out, as it no longer responds to his will, the inertia of the whole gradually comes to rest on the commander's will alone. The ardor of his spirit must rekindle the flame of purpose in all others; his inward fire must revive their hope. Only to the extent that he can do this will he retain his hold on his men and keep control.... The burdens increase with the number of men in his command, and therefore the higher his position, the greater the strength of character he needs to bear the mounting load (1832, pp. 104-5).

Jomini, the French military theorist, saw courage, boldness, and strength of character as the three essential attributes of the general. In his Precis de l'Art de la Guerre (1838), he stated that, excluding the role of the chief of staff, "The best means to organize an army... is to... give the command to a man of tried bravery, bold in the fight and of unshaken firmness in danger" (Heinl, p. 59).

The French commander during World War One, Ferdinand Foch, stated that the two concepts of boldness and strength of will are related aspects of personality. Both are required if the commander is to emerge victorious. In his book, Percepts, published in 1919, he said,

> No victory is possible unless the commander be energetic, eager for responsibilities and bold

> undertakings; unless he possess and can impart to all the resolute will of seeing the thing through; unless he be capable of exerting a personal action, composed of will,.. in the midst of danger (Heinl, 1966, p. 132).

Wavell expressed a similar belief. He claimed that the "most vital of all" qualities of the general is "what we call the fighting spirit, the will to win" (1941, p. 43). Strength of will is also reflected in its resilience to the buffeting which it receives in the tempest of battle. In this regard, Wavell added:

> Now the mind of the general in war is buried, not merely for 48 hours but for days and weeks, in the mud and sand of unreliable information and uncertain factors, and may at any time receive, from an unsuspected move of the enemy, an unforeseen accident, or a treacherous turn in the weather, a bump equivalent to a drop of at least a hundred feet on to something hard. Delicate mechanism is of little use in war; and this applies to the mind of the commander as well as to his body (1941, p. 41-2).

Strength of will is also reflected in another way. In a landmark work, The Face of Battle (1976), John Keegan, professor of military history at the Royal Military Academy, Sandhurst, points out that a necessary and often overlooked requirement of the senior combat commander, at least in the long term, is a hardness of character and coldness of emotion that enables him to withstand stress for extended periods. Although the quotation is long, in this instance it is best to let Keegan speak for himself.

Perhaps because of efforts to identify with their men,..many generals [in World War II] seemed unable to reproduce that necessary resistance to stress which so noticeable stamped the characters of an older generation of chiefs. Sorrow and anxiety spare only the rarest even among leaders; Wellington wept copiously after Waterloo, Frederick the Great had his surgeons bleed him during his battles to lower the tension he felt, and poor Henry VI keened an endless discordant song throughout all the battles which his courtiers obliged him to attend. But the military code traditionally required composure even at moments of personal agony; and it evoked it: Castelnau and Foch each continued to direct operations after receiving news of the deaths of their sons in the Battle of the Frontiers in 1914, Ludendorff to command despite the loss of both his cherished stepsons at the height of the First World War. During the Second World War the code seemed unable to sustain it votaries. Incompetent generals always become casualties: that war broke competent generals also. Rommel, for all his derring-do, experienced agonies from a nervous stomach, which twice took him away from the front at moments of crisis, Guderian was invalided from Russia with heart-failure, Reichenau suffered a stroke during the campaign, Ridgway had a severe blackout in September 1945 and was advised to retire. Mere hardness of character of the sort demonstrated by Zhukov or Model, rather than any particular strategic or tactical flair, increasingly became the principal military virtue as the Second World War dragged on (emphasis added). Other commanders who appeared to stand the strain did so only by cultivating a curious detachment from the conduct of the battles themselves. The three most admired generals of the British, American and German armies - Alexander, Eisenhower and Rundstedt - were each, in their different ways, not really generals at all, non-generals, almost anti-generals. Alexander, hell-raiser though he had been as a young officer, insisted on leaving control to his subordinates and confined himself to fostering good relations within his multi-national army. So to an even more marked degree did Eisenhower, whose aura

> became eventually papal rather than military. Rundstedt, revered throughout the German regular officer corps as its last archetypal Prussian, refused to deal with detail or to look at small-scale maps, as if the fighting itself were distasteful to him, but spent his days reading detective stories and thrice resigned his command (p. 330-331).

James L. Stokesbury has come to a similar conclusion regarding the importance of hardness or strength of character. "Military history," he said, "is littered with the names of great and good men who were not quite hard enough, and whose disinclination to get their men killed caused only more suffering in the long run" (1984, p. 17).

Determination

A concept closely associated with strength of will is determination. It was identified by [illegible]witz as one of the requirements for military genius [illegible]ermination, Clausewitz was not referring to stubbornness or obstinacy but rather to the strength of one's convictions to follow the path suggested by his intuition.

> This has often been called courage d'esprit, because it is created by the intellect. That, however, does not make it an act of the intellect; it is an act of temperament. Intelligence alone is not courage; we often see that the most intelligent people are irresolute. Since in the rush of events a man is governed by feelings rather than thought, the intellect needs to arouse the quality of courage, which then supports and sustains it in action... Determination proceeds from a

> special type of mind, from a strong rather than a brilliant one (1832, pp. 102-3).

Clausewitz said that two concepts which are closely related to determination and also are required of the general are staunchness and endurance. While these two are similar to one another, the former "indicates the will's resistance to a single blow," and may result from strong emotion while the latter "refers to prolonged resistance," and is sustained by intelligence (1832, p. 105). He also called these qualities perseverance, the ability to stick by a chosen course in the face of countless impressions and pressures that are both discouraging and disturbing. He describes its function thus:

> A general in time of war is constantly bombarded by reports both true and false; by errors arising from fear or negligence or hastiness; by disobedience born of right or wrong interpretations, of ill will, of a proper or mistaken sense of duty, laziness, or of exhaustion; and by accidents that nobody could have foreseen... Perseverance...is the essential counterweight (1832, p. 193).

Ambition

Another requirement of the senior commander is ambition. According to Clausewitz, ambition and the longing for honor and renown are essential. "Of all the passions that inspire men in battle none...is so powerful and so constant" (1832, p. 105). He said that,

> Other emotions may be more common and more venerated - patriotism, idealism, vengeance, enthusiasm of every kind - but they are no substitute for a thirst for fame and honor...and so far as the commander-in-chief is concerned, we may well ask whether history has ever known a great general who was not ambitious; whether, indeed such a figure is conceivable (1976, pp. 105).

Charles de Gaulle expressed a similar view. According to the commander of the French resistance in World War II,

> Every man of action has a strong dose of egotism, [and] pride,..but...these will be forgiven him, indeed they will be regarded as high qualities, if he can make of them the means to achieve great ends... Nothing great will ever be achieved without great men, and men are great only if they are determined to be so (1960, pp. 64 & 127).

Independence of Mind

Finally, the senior commander must have the independence of mind to act as he thinks best irrespective of the beliefs of others or commonly accepted notions of appropriateness or prudence. As Wavell expressed it:

> There is one other moral quality I would stress as the mark of the really great commander as distinguished from the ordinary general. He must have a spirit of adventure, a touch of the gambler in him. As Napoleon said, "If the art of war consisted merely in not taking risks glory would be at the mercy of very mediocre talent." ...The general who allows himself to be bound and hampered by regulation is unlikely to win a battle (1941, p. 43).

A similar belief was expressed by William McDougall who claimed that:

> Thousands of moralists have solemnly repeated the old saw that only he can command who has learnt to obey. It would be nearer the truth to say that only he can command who has the courage and the initiative to disobey (Heinl, 1966, p. 59).

This is, however, not simply a matter of being a non-conformist. A rebel spirit is not necessarily a requirement. As Cirillo (1985) points out; "If World War II had its [rebel] Allens, Chennaults and Woods, so too, did the fighting ranks include the [conforming] J. Lawton (Lightning Joe) Collins and Matthew B. Ridgways" (p. 15).

KNOWLEDGE AND EXPERIENCE

> Generalship, at least in my case, came not by instinct, unsought, but by understanding, hard study and brain concentration. Had it come easy to me, I should not have done it as well... The perfect general would know everything in heaven and earth (emphasis added) (Heinl, p. 128-32).
>
> T.E. Lawrence
> Letter to B.H. Liddell Hart
> 26 June 1933

The Relationship of Knowledge to Ability

So far we have examined the intellectual attributes required of the senior commander as well as those qualities of character and temperament which are essential for his success. The final two broad categories of attributes which shall be discussed can be described as: a) knowledge and experience and b) skills

and ability; but first some discussion on these two categories of attributes.

There is frequently conceptual difficulty in distinguishing between knowledge and experience, on one hand, and skills and ability, on the other. This is for two reasons. First, knowledge becomes integrated in one's personality, a part of the way one does things. It then becomes impossible to analyze to what degree any knowledge, or even what knowledge, influenced one's actions. As Clausewitz saw it,

> We have already argued that knowledge and ability are different things - so different that there should be no cause for confusion... No matter how obvious and palpable the difference between knowledge and ability may be.., it is still extremely difficult to separate them in the individual... Knowledge must be so absorbed into the mind that it almost ceases to exist in a separate, objective way... By total assimilation with his mind and life, the commander's knowledge must be transformed into a genuine capability. That is why it all seems to come so easily to men who have distinguished themselves in war, and why it is all ascribed to natural talent (Clausewitz, 1832, pp. 147-8).

This is why one can rarely determine the influence of knowledge on ability and why the process seems so transparent.

The second reason why determining the relationship between knowledge and ability is problematic is simply because knowledge and experience often are preconditions for the possession of certain skills and abilities. By

means of illustration, consider the following simplistic, albeit, valid example.

Certainly, extensive football knowledge and experience are required if one is to have the skills and abilities of a consummate football coach. In this instance, knowledge and experience are essential preconditions for skill and ability in coaching. In other cases, however, the links between knowledge and experience, and subsequent skill and ability are not as clear. One could argue that many college and professional football players, of no small skill and ability, have demonstrated little knowledge of or extensive experience in the finer nuances of football tactics or even the strategies for bringing about success. In this case it is clear that the skills and abilities of the athlete are not so much a function of knowledge or experience as they are dependent upon psycho-motor skills, musculature, reflex speed, and the desire to excel. In other words, while experience and knowledge are critical ingredients in football <u>coaching</u> skills and ability, they are of considerably less importance in football <u>playing</u> skills and ability. Thus, we can see that different skills and abilities depend to greater or lessor degrees upon knowledge and experience.

The football analogy can, of course, be extended to the practice of the art of war at high levels of command. The question then becomes, "To what extent is knowledge of the theory of war necessary for the skillful practice of the art of the senior military commander?" No one would argue that there is a direct correlation between the two. Otherwise, Clausewitz, the greatest military theoretician of his era, would also have been recognized as the greatest military commander of his day when clearly he was nothing of the sort. Clausewitz himself understood this. Similarly, U.S. Grant would never have been a great general for as he confessed, "I doubt that any of my officers ever discovered that I hadn't bothered to study tactics" (Marshall, 1966, p. 41).

In describing the relationship between knowledge of military theory and the practice of military skills Clausewitz said:

> Theory will have fulfilled its main task when it is used to analyze the constituent elements of war,.. to illuminate all phases of warfare in a thorough critical inquiry. Theory then becomes a guide to anyone who wants to learn about war from books... and will help him avoid pitfalls... It is meant to educate the mind of the commander,... <u>not to accompany him to the battlefield</u> (emphasis added)... Distinguished commanders have never emerged from the ranks of the most erudite or scholarly officers... Knowledge in war <u>is very simple</u> (Clausewitz's emphasis), being concerned with few subjects, and only with their final results at that. But this does not make their application easy (1832, pp. 141-146).

In other words, while military knowledge concributes to military skill and ability, knowledge serves as a guide to action and can not substitute for action itself.

General Omar Bradley felt that experience was important in developing a senior commander. In spite of the fact that, "Napoleon led armies before he was 30 and that Alexander the Great died at the age of 33," Bradley felt that Napoleon improved with experience and that Alexander might have been greater had he lived longer. Bradley added that he, "...especially liked General Bolivar Buckner's theory that: 'Judgment comes from experience and experience comes from bad judgment'" (1966, p. 53).

In summary, certain types of knowledge and experience, as they pertain to the art of warfare, high command, and generalship, are necessary but insufficient conditions for the skillful practice of the trade of the military genius. Further analysis may help reveal exactly what knowledge and experience are essential and, in turn, to what skills and abilities they are or are not related. Of course, in describing the types of knowledge essential to the senior commander, we must presume that he has the skills and ability to apply that knowledge.

The opening quotation of this section by T.E. Lawrence, while intriguing, does not answer the question,

"What knowledge and experiences are essential if a senior commander is to succeed?" Lawrence suggests that the more the general knows the more successful he will be. Perhaps this is true. But no one man can know everything so he must focus his learning in specific areas. As Arch Duke Charles of Austria claimed, "A great captain can only be formed by long experience and intense study" (Heinl. p. 130). What, then, should he study? What are the requirements for gaining this knowledge and what is the value of experience? Clausewitz provides a succinct answer to these questions.

> No activity of the human mind is possible without a certain stock of ideas; for the most part these are not innate but acquired, and constitute a man's knowledge... The knowledge needed by a senior commander is distinguished by the fact that it can only be attained by a special talent, through the medium of reflection, study and thought: an intellectual instinct which extracts the essence from the phenomena of life, as a bee sucks honey from a flower. In addition to study and reflection, life itself serves as a source. Experience, with its wealth of lessons, will never produce a Newton or a Euler, but it may well bring forth the higher calculations of a Conde or a Frederick... In the art of war experience counts more than any amount of abstract truths (1832, pp. 146-6, 164).

A review of the historical literature suggests that the knowledge essential to the senior commander can be classified into four general categories: 1) the art of war, 2) administration and logistics, and 3) human nature. It is to the first of these that we now turn.

The Art of War

As early as 400 B.C., the philosopher, Socrates, recognized the value of a thorough knowledge of the art of war. "The general...should..., as a matter of course, know his tactics; for a disorderly mob is no more an army than a heap of building materials is a house" (Heinl, p. 128). The Italian Count de Montecucculi wrote in his Commentaries on War in 1740, "The first quality in a general in chief is a great knowledge of the art of war." He added that contrary to the assertions of some, this knowledge, "...is not intuitive, but the result of experience. A man is not a born commander. He must become one" (Heinl, p. 130).

Winston Churchill also recognized the importance of knowledge of the art of war and shared de Montecucculi's belief that this knowledge was not intuitive or inborn. Writing in 1932, he said:

> In battle, two things are usually required of the commander-in-chief: to make a good plan for his army and secondly, to keep a strong reserve... But in order to make his plan, the general must not only reconnoiter the battleground, he must also study the achievements of the great Captains of the past (emphasis added) (Heinl, p. 32).

Even Mao Tse-tung recognized that knowledge of the art of war was critical in the success of a general and this knowledge came from study. In his volume On the Study of War, written in 1936, he asserted:

> The ever victorious general is rare and there have been very few of these in history, but what is necessary is that our generals should have studied the art of war and paid attention to its rules; it is then that, with this wisdom tempered by courage, our military leaders will have better chances of success (Heinl, p. 132).

Administration and Logistics

The importance of a knowledge of administration and logistics has long been recognized as an essential ingredient for senior command. Socrates noted that, "The general must know how to get his men their rations and every other kind of stores needed in war" (Heinl, p. 128).

Reflecting the British penchant for deliberate planning and methodical execution, Wavell expressed a more extreme view. To him, the art of war was not so much knowledge of tactics, operations, or strategy, but instead, he believed that, "Administration...is the real crux of generalship" (1941, p. 41). Wavell is more emphatic concerning the importance of this dimension of warfare than other theoreticians or generals. He claimed that:

> The most important [of the general's mental qualities] is what the French call *le sens du practicable*, ...knowledge of what is and what is not possible. It must be based on a really sound knowledge of the "mechanism of war," *i.e.*, topography, movement, and supply. These are the real foundations of military knowledge, not strategy and tactics as most people think.

> It is the lack of this knowledge of the principles and practice of military movement and administration - the "logistics" of war, some people call it - which puts...amateur strategists wrong, not the principles of strategy themselves, which can be apprehended in a very short time by any reasonable intelligence... Unfortunately, in most military books, strategy and tactics are emphasized at the expense of the administrative factors... You [should] always...bear in mind the importance of this administrative factor, because it is where most critics and many generals go wrong... [It is] knowledge of the mechanics of war, not the principles of strategy, that distinguishes a good leader from a bad (emphasis added) (1941, p. 43-50).

James L. Stokesbury, coauthor of Masters of the Art of Command, noted that knowledge of administration and logistics was a necessary precondition for success, but by itself was insufficient. In a separate study of military commanders, Stokesbury reached the conclusion that,

> There have been few great leaders who were not knowledgeable about the mechanics of the business; you cannot be an inspiring leader if you neglect the logistics that feed your men. They will not give you their confidence if you forget to bring up the reserve ammunition,..or even if you consistently schedule two columns to use the same crossroads at the same time... One can go very far on basic managerial skills, and one cannot do much without them (1984, p. 18).

Human Nature

Reflecting the importance of psychology in senior command, as well as in leadership, a number of

authorities have described the value of an intimate knowledge of human nature.

Whenever discussing knowledge of human nature, however, there is an inherent difficulty. Irrespective of training, experience, background, or philosophic orientation, everyone is a self-proclaimed expert on human nature. One will rarely find a military man above the rank of sergeant who does not consider himself to be the recipient of tremendous gifts of insight regarding the mental processes of his fellow brothers in arms. While soldiers will readily confess to inadequacies in knowledge concerning all aspects of their profession, it is uncommon to encounter a soldier of any rank willing to admit that he does not understand people very well. However, the fact of the matter is, that some people understand human nature much better than others. And it is this understanding of human nature, of psychology if you will, that is essential for the success of the high commander. Clausewitz stated that it is not necessary for the general to be a trained psychologist, as such. However, "The Commander of an Army must know the character, the feelings, the habits, the particular faults and inclinations, of those whom he is to command" (Heinl, p. 61).

In describing the requirement for the general to be an astute judge of character and human nature, J.F.C. Fuller called this type of knowledge "psychological intelligence." In explaining the meaning of this concept, he minimizes the importance of the ability to recall facts and details, for:

> ...in war it is not so much the knowledge contained in...books and...manuscripts which is so important, it is insight into the personality of their writers including oneself. 'Know thyself' are two words of wisdom... For the true general is the creator quite as much as the applier of knowledge. What kind of knowledge? Psychological rather than operational (1936, pp. 25-26).

General Wavell also saw knowledge of human nature as indispensable to the high commander. In describing its value and importance he illustrates how Napoleon was able to use this type of knowledge. Wavell said:

> [The general] should have a genuine interest in, and a real knowledge of, humanity, the raw material of his trade... If you can discover how a young unknown man inspired a ragged, mutinous, half-starved army and made it fight, how he gave it the energy and momentum to march and fight as it did, how he dominated and controlled generals older and more experienced than himself, then you will have learnt something. Napoleon did not gain the position he did so much by a study of rules and strategy as by a profound knowledge of human nature in war. A story of him in his early days shows his knowledge of psychology (1941, p. 43-48).

Yet another British author described the importance of psychological knowledge. In his Thoughts on War, written in 1944, B.H. Liddell Hart, said:

> A commander should have a profound understanding of human nature, the knack of smoothing out troubles, the power of winning affection while communicating energy (Heinl, p. 61).

SKILLS AND ABILITIES

Having described the knowledge necessary for the senior commander and having assumed that he has the ability to apply that knowledge, we turn to skills and abilities, the final category of required attributes as identified by historians, military theoreticians, and former generals.

A skill or ability is a capacity to do something. It is usually something that is learnable or can be improved. It is a demonstrable behavior which can be seen by others. This is in contrast to conceptual ability, character and temperament, and knowledge and experience, all of which exist only in the head and heart of the commander and which are only inferred based on behavior.

The skills and abilities which are requirements for high command can be grouped into three categories: a) a sense of locality, b) health and physical fitness, and c) technical expertise.

A Sense of Locality

According to Clausewitz, a sense of locality is an essential prerequisite for the superior senior commander in military operations. This ability is described as "the faculty of quickly and accurately grasping the topography of an area (Clausewitz's emphasis) which enables a man to find his way about at any time" (1832, p. 109). This skill is not required of a senior staff officer who seldom leaves his headquarters. But then, by Clausewitz's definition, a desk bound staff officer is not and can never be a "military genius."

Health and Physical Fitness

The rigors of warfare demand of the general a strong body as well as a strong mind. Physical fitness is required not just to endure deprivation, but to withstand the constant grinding imposed by long months of unrelenting stress and strain. Marshal de Saxe included good health as one of the three most important requirements for a general (Heinl, p. 126). Napoleon embodied physical stamina and employed it in the exercise of his command. According to van Creveld:

> An iron constitution enabled [Napoleon], at least until 1812, to be everywhere, see everything, and sustain the most amazing physical feats such as ten days under cloth in subfreezing temperatures before Austerlitz or covering 150 miles on horseback in 48 hours in Spain (1984, p. 63).

Physical fitness is also required because, as von der Glotz stated, one's mental condition is influenced, to a large degree, by one's physical well being. In other words, it is well nie impossible to be intellectually sharp when one is physically dull. This was pointed out by von der Glotz in 1906.

> Good health and a robust constitution are invaluable to a general... In a sick body, the mind cannot possibly remain permanently fresh and clear. It is stunted by the selfish body from the great things to which it should be entirely devoted (Fuller, p. 11).

J.F.C. Fuller said the same thing. According to him the third and final requirement for the senior level commander is physical fitness. This quality, he says, is necessary because "the physical is the foundation of the moral" (1936, p. 19) and a weak body weakens one's mind, spirit, enthusiasm, and determination. Physical fitness is especially important under combat conditions. "In peace time it may be otherwise, but in war time the physical, intellectual and moral stresses and strains... immediately discover the weak links in the general's harness" (1936, p. 18).

Fuller equates physical fitness with age. Accordingly, he suggests that the poorly conditioned or aged commander "is unable to share with his men the rough and tumble of war; instinctively he shuns discomfort, he

fears sleeping under dripping hedges, dining off a biscuit, or partaking of a star-lit breakfast..." (1936, p. 18).

Wavell also expressed a similar opinion regarding the value of physical fitness. He stated, "...I hold to be the first essential of a general, the quality of robustness, the ability to stand the shock of war" (1941, p. 41). He hedged, however, in conceding that, "Health in a general is...a relative quality only. We would...sooner have Napoleon sick on our side than many of his opponents whole" (1941, p. 42). He also added:

> It is impossible really to give exact values to the fire and boldness of youth as against the judgment and experience of riper years; if the mature mind still has the capacity to conceive and absorb new ideas, to withstand unexpected shocks, and to put into execution bold and unorthodox designs, its superior knowledge and judgment will give the advantage over youth. At the same time there is no doubt that a good young general will usually beat a good old one (emphasis added) (1941, p. 43).

General Omar Bradley, likewise, attested to the importance of stamina and physical fitness. In an address to the Command and General Staff College, in 1966, he employed the following examples.

> General William T. Sherman was a good example of a leader with outstanding mental and physical energy. During the advance from Chattanooga to Atlanta, he often went for days with only two or three hours sleep a night and was constantly in the saddle reconnoitring... Conversely, a sick commander is of limited value... I had to relieve several senior

> commanders during World War II because of illness. It is often pointed out that Napoleon did not lose a major battle until Waterloo where he was a sick man (1966, p. 52).

In a similar vein, S.L.A. Marshall (1966, p. 40) listed "physical robustness" as one on the three essentials of high command. Finally, General Matthew B. Ridgway recognized the importance that physical fitness played in his own career as a division, then a corps, and finally, as an army commander. He attributed much of his success to his ability to keep up with the best of his troops. Specifically addressing the requirements for senior command, he stated,

> The division commander should have the physical endurance, stamina, and reserves of his best infantry battalion commanders, because that is where he belongs - with them - a good part of the time; the corps commanders, those of his regimental commanders; and the army commander just about the same (1966, p. 46).

Technical Expertise

Technical expertise is the final skill required of the senior commander. In fact, it has been described as an ability that is essential for every level of command. Few, however, agree on exactly what specific military skills constitute technical expertise at each organizational level, or how changes in warfare have altered these demands. Perhaps the most inclusive approach was assumed by Napoleon. In describing his own

level of technical expertise, he claimed he "could personally do everything connected with war" (van Creveld, 1984, p. 63). Of course, with the increasing complexity of the battlefield and the impact of technology in warfare, those days have long ago disappeared when a single general could master all tasks of all his subordinates.

Clausewitz recognized that the technical expertise required of the general was different from that required of his subordinates. In essence, he stated that the general must have the technical expertise to accomplish those tasks associated with his role as commander. As example, Clausewitz said, the commander "...need not understand anything about...the harness of a battery horse, but he must know how to calculate exactly the march of a column" (Heinl, p. 61).

In summation, there appears to be little agreement on what constitute the specific technical skills of the senior commander that are required in the performance of his job. There does seem to be consensus that "technical competence," however it is defined, is, in some way, important. The significance of this inability to agree on the technical requirements for senior command shall be analyzed in more detail in subsequent portions of this paper.

CONCLUSIONS

This chapter has reviewed the historical literature and the requirements identified as necessary in the exercise of the art of high command. There seems to be universal agreement that the senior commander requires exceptional mental abilities, that he must be a man of vision and perspective who can comprehend and evaluate many factors simultaneously while maintaining a flare of originally and creativity. Similarly, there is agreement on the aspects of personality which characterize military greats. All of these aspects of temperament reflect a common underlying theme or dimension. Courage, presence of mind, boldness, strength of will, determination, ambition, and independence of mind all describe a person who knows what he wants and will let no obstacle stand in his way until victory is won, until his goal is achieved. These characteristics all seem to indicate that successful commanders all possess a very high degree of task or mission orientation.

In describing the knowledge and experience as well as the skills and abilities of senior commanders there is less agreement. While a few authors have discussed the various requirements for knowledge and ability in senior commanders there is little agreement concerning

specifically what these requirements are. Further, little has been written to substantiate the existence of these requirements. The only exception to this pattern seems to be a universal agreement that health and physical fitness are essential, if only because poor health and physical weakness drain courage and determination and sap mental ability. The significance of these conclusions shall be analyzed in more detail in the concluding chapter of this paper.

Chapter 4

Scientific Perspectives of Senior Command

> While books on management and 'decision making' have multiplied promiscuously in recent years, works on command.. are, for one reason or another, fairly rare.
>
> Martin van Creveld
> Command, 1984, p. 10

The above quotation by the noted historian, Martin van Creveld, accurately summarizes the state of scientific research concerning the requirements for senior command. Van Creveld reached this conclusion after extensive research for the U.S. Army into the processes of command, primarily at senior levels. As this chapter will show, van Creveld was not far off base.

As in the previous chapter, the attributes required for command at senior levels will be divided into four categories: a) cognitive ability, b) character and temperament, c) knowledge and experience, and d) skills and ability. However, this chapter shall examine the scientific evidence supporting these requirements instead of the testimony and assertions of historians and military theoreticians. The preponderance of the scientific evidence will be drawn from the disciplines of psychology, organizational behavior, and management science. While the literature, as shall be shown, is extremely limited, the scientific evidence that does

exist concerning the requirements for senior command suggests the following.

COGNITIVE ABILITY

"The need for [cognitive] ability is the single most important factor that distinguishes the functions of the senior commander from those of the [lower level] leader and the manager" (Zais, 1982, p. 37). A large number of studies in the fields of management science and psychology describe the intellectual abilities required of leaders (Bass, 1981, pp. 50-54). Cognitive ability can, in some ways, be related to almost any activity performed by the senior commander. This section shall attempt to group in a meaningful way those activities which are most highly reflective of cognitive ability and summarize what has been said about them in relation to executive or senior level command performance. The cognitive abilities required of the senior commander can be grouped into two categories. These are: a) cognitive complexity and b) systems thinking. Of course these categories are not mutually exclusive and there exists some overlap between them. However, this categorization of mental abilities facilitates analysis and therefore shall be employed.

As in other sections of this chapter, the results of individual studies or research projects shall not be reported. Instead, the findings of series of studies and large bodies of research shall be summarized.

Cognitive Complexity

One model concerning the requirements for cognitive ability has emerged from a large body of research conducted by Dr. Elliot Jacques. Working under contract with the Army Research Institute for Behavioral and Social Science, Jacques, has applied his "stratified systems theory" to Army organizations to describe the cognitive abilities required of leaders, commanders, and staff officers at various organizational levels (1984a, 1984b). Jacques argues, that there are two types of ability required for effective performance at various organizational levels and that the maximum organizational level at which one can effectively perform depends upon one's level of ability in both of these two broad categories. These are cognitive ability and "psychological tools". These shall be explained in turn.

First, Jacques defines cognitive ability, which he variously calls "intellectual ability", "cognitive complexity" and "cognitive power", as "the scale and complexity of the world which an individual is able to pattern and construct, including the amount and

complexity of the information being processed" (1984b). Cognitive complexity is not the same as intelligence or IQ as commonly understood in academic or theoretical terms. While IQ is related to performance in school and learning testable knowledge, it is only slightly correlated with the ability to perform successfully at increasingly complex organizational levels (Campbell, Dunnette, Lawler, & Weick, 1970). An examination of the research showing the correlation between the IQ scores, academic class standing, and the ultimate performance of military academy graduates confirms this. For example, S.L.A. Marshall (1966) noted that,

> Of 105 major generals who served in World War I, 56 had failed to score above the middle of their class in mathematics. Of 275 in World War II, 158, or 58 percent, were in the middle group...in the same subject.

Noted examples of this phenomenon include George C. Marshall who was at the top of his class at the Virginia Military Institute (VMI), Dwight Eisenhower, who was in the middle of his class at West Point, and George Patton who took five years just to finish at the bottom of his class at West Point, and that was after having spent a year at VMI. Moreover, whatever it is that IQ measures, it stops developing around the age of eighteen. On the other hand, "cognitive power matures in quality and grows in amount throughout a person's lifetime through

adulthood into old age" (Jacques, 1984a, p. 9; Horn, 1978a, 1978b). This is easily confirmed by asking any fifty year old how his world view or model of the world has changed in the last thirty years. If he understands the question he will invariably say that "things are not as simple as they seemed before," that he "recognizes subtleties and nuances that were unseen before," or simply that he "has a broader perspective" than he had 30 years earlier. In essence, he will say that his world view is more complex, and that it takes into account and interrelates more variables. His IQ has not changed, his cognitive complexity has.

According to Jacques, cognitive complexity is measurable in terms of a person's "time-span of discretion," that is, "the longest time forward of the goals set for specific projects which the person is able to plan and carry out" (1984b). At the lowest level, time-span of discretion varies from 1 hour to 3 months. People whose cognitive complexity places them at this level are only able to work directly upon physical objects, or serve people, or lead by demonstration and pointing, one task at a time. Improvement occurs with practice and experience rather than by thinking out and articulating new ways of going about things as you do them. The activity carried out by people at this level

is called "concrete shaping." According to Jacques, this is the cognitive level of most enlisted men and noncommissioned officers.

As a second example, company commanders must be at the next higher cognitive level, according to Jacques. They must be able to plan for and execute tasks three months to a year in the future. This is done by putting together and programming a series of direct operating tasks, choosing the methods for these tasks, and changing programs or methods as required by the situation. These tasks correspond to our earlier definition of management. Individuals at this level are able to accumulate knowledge about aggregates of tasks and can deal with goal-ambiguity by reflecting upon the goal to clarify it at the same time they work toward attaining the goal. Preparation for a company's annual general inspection is an example of such a task. The tasks at this cognitive complexity level are called "reflective articulation."

Figure 4 summarizes the seven cognitive levels which Jacques has identified, the time-span of discretion for each, the cognitive tasks inherent in each level, and the level of U.S. Army command corresponding to each level.

Insert Figure 4 About Here

Cognitive Level	Time-Span of Discretion	Organization Level	Cognitive State	Rank
VII	20 Years	Army	Creates complex systems and organizes major resources. Extrapolates system needs.	GEN
VI	10 Years	Corps	Oversees complex systems and defines their relations with environment.	LTG
V	5 Years	Division	Shapes complex systems.	MG
IV	2 Years	Brigade	Transforms operating systems. Shift from direct command.	BG COL
III	1 Year	Battalion	Extrapolates functional system trends. Balances current/future requirements.	LTC MAJ
II	3 Months	Company	Defines direct work. Plans and controls aggregates of tasks.	CPT LT
I	1 Day	Platoon	Shapes things - Hands on direct work with objects and people in task execution.	NCO EM

Figure 4. The requirements for cognitive states corresponding to organizational levels (after) Jacques, 1984b and 1984c).

Notice that the top three levels, division, corps, and army, correspond to what has been defined as senior levels of command. Specifically, a successful, peacetime division commander must be at cognitive level five. At this level the two-star commander must have the cognitive ability to plan and work on projects that will reach fruition five to ten years in the future. He does this by operating on the multiple sub-units, regulations, facilities, and people that comprise that complex system, by modifying the boundaries of that system, and by adjusting to second and third order consequences of his actions and the action of others. This cognitive level is at the upper limit of human capacity to function by predicting or forecasting what the future might hold and how it should be planned for. Above this level commanders must be concerned with constructing the future rather than predicting it. The individual division commander who lacks the cognitive complexity to perform the activities described as essential at this level can not be effective, in the long term, in a peacetime environment. The effects of war and combat conditions on the requirements for cognitive complexity shall be described later in this section.

A peacetime corps commander must be able to develop and deploy many of these complex division-like systems. His planning horizon must extend ten to twenty years into the future. He is no longer forecasting the future and acting based on his predictions. He must actively engage in shaping the future. According to Jacques, there is another dramatic change at this level. Whereas division commanders must work within a complex system to effect change and must view that organizational system as existing within a changing environment, the three-star commander must work outside his system of systems. In other words, he must work not only within his corps but outside the corps as well and within the constantly changing environment of political, economic, social, technological, and intellectual variables. This "calls for an ability to impose upon one's world a cognitive ordering within which what is deemed most relevant can be sorted out from the rest, priorities kept in a continual state of good repair, and as friendly an environment as possible sustained" (1984a, p. 15). These tasks Jacques calls the "reflective articulation of complex systems" (1984b).

Finally, the peacetime four-star commander, thinking twenty to fifty years ahead, must "create a strategic context for the development or deployment of complex

systems" (1984b). Here at cognitive level seven the army or MACOM commander is concerned with directing a system which itself can carry out the task of developing or transforming complex division-sized (level five) institutions. It is the work of constructing organizations and systems and placing those into society at large. The work at this level Jacques calls "strategic design for development or design of complex systems" (1984b).

We have already stated that an individual's cognitive complexity increases over time. Clearly, however, age is not the only factor which influences one's level of cognitive complexity. The question of how this intellectual growth and maturation process occurs is extremely important and has significant implications for how the Army selects trains, and promotes its officers. As Jacques' theory suggests,

> At any particular point in people's careers there is a maximum time-span at which any given person can work. If people are employed at levels of work below that maximum time-span they feel their capabilities are being under-utilized and they experience boredom and frustration. If people are employed at levels of work above that time-span, they become disorganized and anxious and unable to cope. If people are fortunate enough to be employed at levels of work that coincide with the maximum time-span which they are capable of achieving, then they feel comfortably employed, and so long as their work is of interest and they have the appropriate knowledge, skill and

> temperament, they will derive satisfaction from that work (1984a, p. 25).

A significant aspect of this theory is that people can be classified, beginning between ages 20 and 25, as to the potential highest level of cognitive complexity which is attainable for them. This highest potential level is called "mode." Modes correspond to the seven levels of cognitive complexity as measured by time-span. In other words, through testing the Army has the capability to assess a senior lieutenant and determine whether or not he has the potential cognitive ability to be promoted and, if so, to what rank he might rightfully aspire. This process would be limited, of course, by the degree of accuracy of he testing process, but there exists today the capability of determining a ball-park estimate of potential cognitive ability or mode that is not far wrong and that can be measured with fairly high reliability. The relationship between age, time-span or level of cognitive complexity, and mode is shown in Figure 5. Note that there exists a regular curve or rate of development for each mode.

Insert Figure 5 About Here

Effects of Combat. In combat there is an enormous compression of time and space. The planning perspective

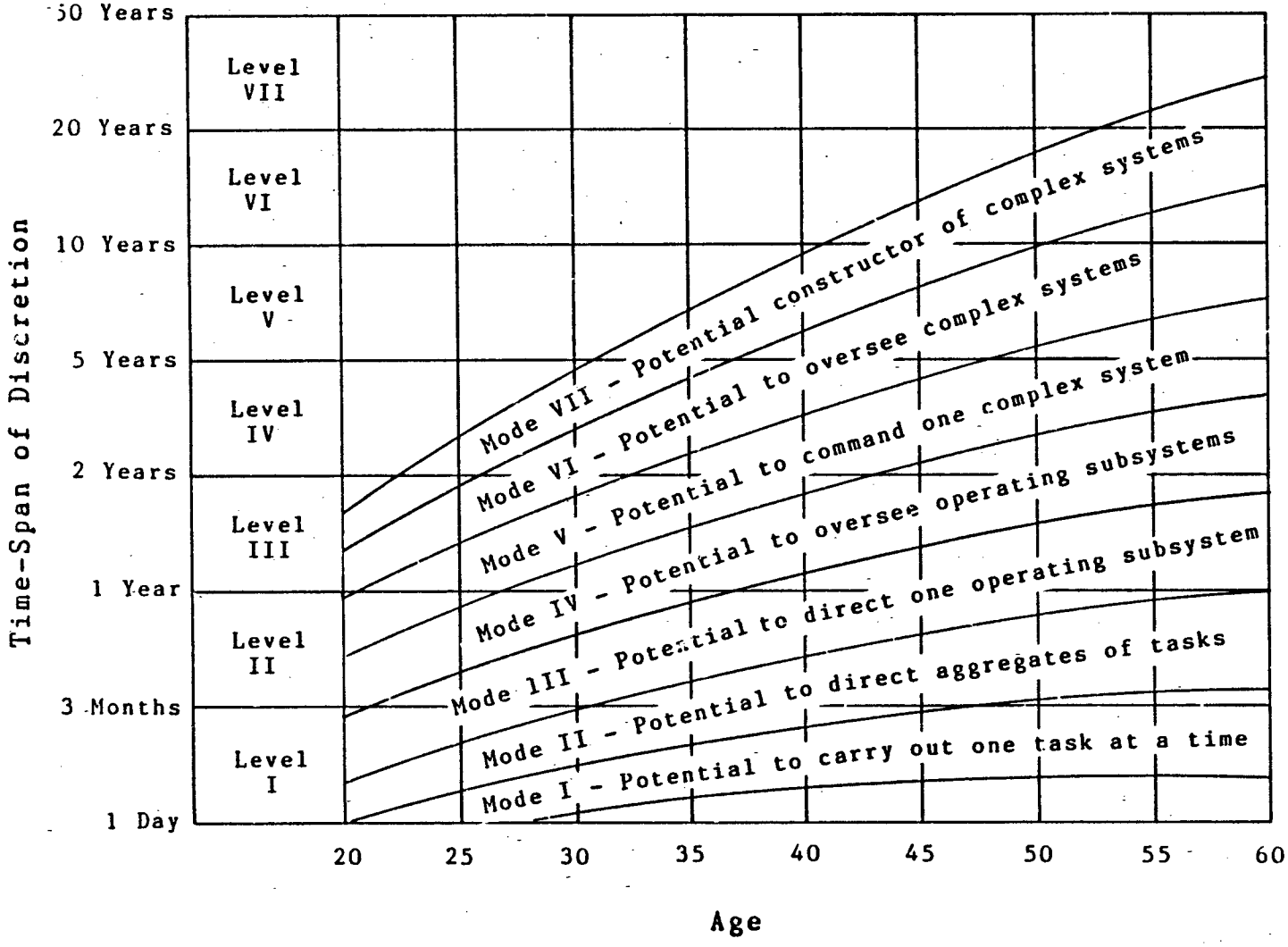

Figure 5. Cognitive power maturation curves (after Jacques, 1984b).

at all organizational levels is reduced significantly. For example, battalion level planning extends, at most, a week into the future. Brigade level planning focuses no further than a month ahead. At the senior levels of command, the division commander must be thinking and planning three months into the future, the corps commander six months, and the army commander must be able to anticipate events and devise strategies to cope with changing circumstances a year in advance. Situations short of combat but requiring a heightened state of readiness above that normally expected in peacetime, demand time perspectives somewhere in between. In other words, as one approaches combat conditions, one's required time perspective is reduced and hence the requirement for cognitive complexity is reduced. The effect of the compression of time-span of discretion by combat is summarized in Figure 6.

Insert Figure 6 About Here

This relationship suggests that the requirements for cognitive ability for senior level combat commanders differ from those for peacetime commanders. For example, one might speculate about the efficacy of George S. Patton as a peacetime army commander.

Compression is the accompaniment of the intense focus on and limitation of attention in both time and space, which occurs in emergencies.

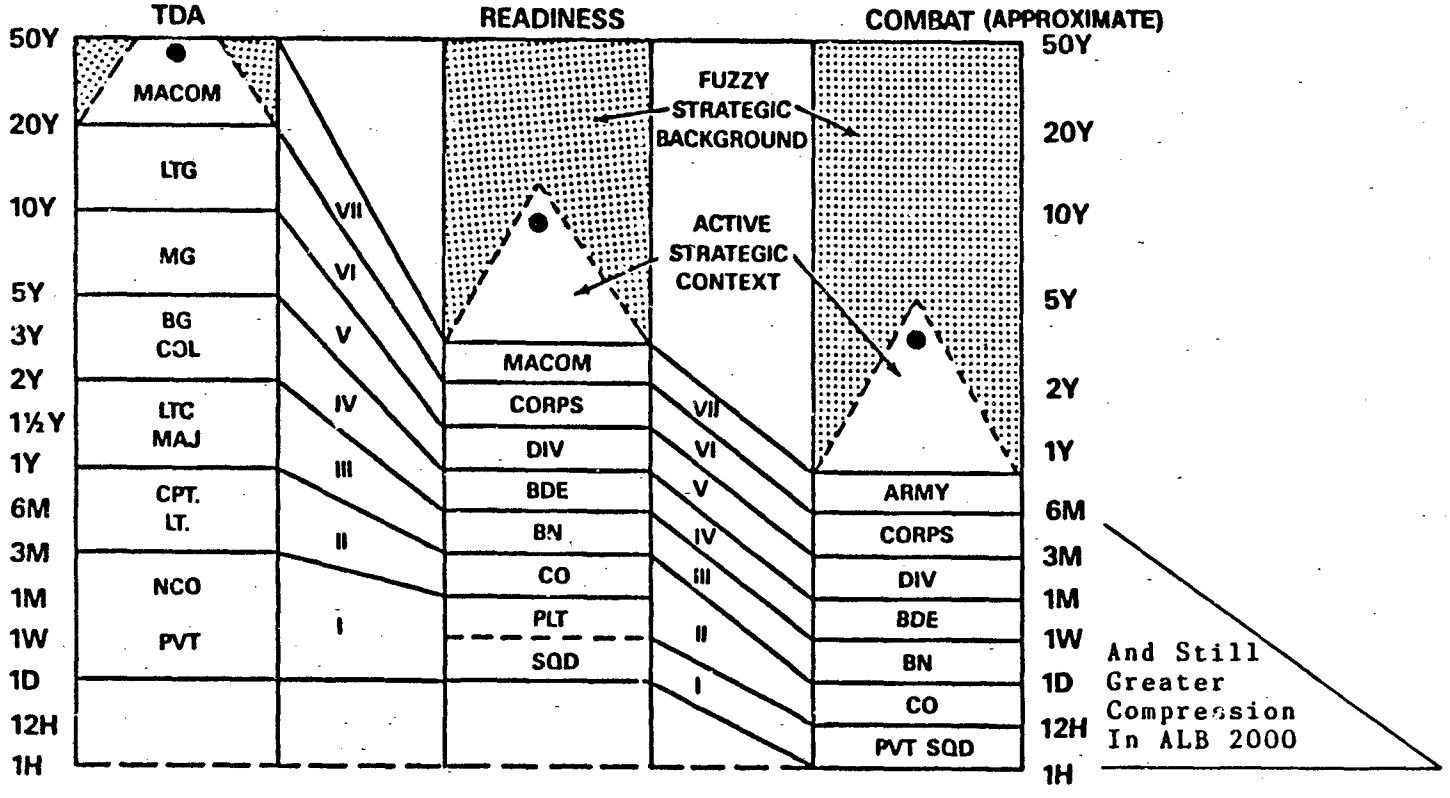

Figure 6. Compression of action time with closeness to combat (Jacques, 1984c).

Another perspective of the intellectual requirements for generalship is provided by Dr. David Campbell of the Center for Creative Leadership at Greensboro, North Carolina. Between 1978 and 1982, sixty-six Brigadier General designees in the U.S. Army, along with 1200 other mid- and top-level civilian executives, attended the one week Leadership Development Program in Greensboro. Each participant was the subject of extensive psychological testing as well as evaluation in small group exercises. Using two standard IQ tests, Campbell (1984, pp. 7-9) found the generals to be highly intelligent, more so even than the top civilian executives. (He also discovered they were extremely well educated; all but one had graduate degrees and one in five had a doctoral level degree.) This suggests that, at least in the present day peacetime environment, intelligence is a critical variable in the making of a general. However, there are problems with the interpretation of these data since all the general officer selectees who attended the program were volunteers. It could be that the self selection of participants systematically biased the results. For example, more highly educated generals might be more likely to want to attend such a program.

Systems Thinking

Another way in which the requirements for cognitive ability for the senior commander have been described is in terms of "systems thinking" (Ackoff, 1981). This is the ability to understand and think in terms of multiple causes for single events and to recognize second and third order effects of organizational practices. It also implies the ability to balance the demands of competing systems so as to integrate the separate systems into the most effective suprasystem. The requirement for the cognitive ability to engage in systems thinking is well illustrated by the following example:

> A senior commander must be constantly concerned with how things relate to each other. His desk is the point of contact between a multiplicity of groups, issues, pressures, values. Since every unit in the command is concerned primarily with its own operations, each constantly acts as a pressure group demanding that its point of view and ideas be given more consideration, that things which hamper its activities be changed, that other units give way to it, and that it be expanded or improved so that it can do a better job. Thus, the supply system will be devoted to its own methods and procedures; it will want to have better techniques, more records, and closer controls; and it will give the impression that all other activities should be subordinated to its routines. To other units, it may appear that the supply people think the command is being run for exclusive benefit of supply interests. In the same way, however, the medical system seeks to improve and expand its activities, seeks more authority, and tries to exert more control over command activities. Similarly, other systems struggle to build up their functions (DA Pamphlet 600-15, 1968).

As the above example shows, closely related to the requirements for cognitive ability described by Jacques, is the requirement for the senior commander to conceive of his command in terms of the total system within which it operates. This cognitive ability implies a broad point of view transcending a parochial focus on the immediate organization. The senior commander must also be able to see his organization as an integrated system n which the various component subsystems are interrelated.

According to Jacques, the second prerequisite for successful senior command, beyond possession of the requisite cognitive ability, is possession of the proper "psychological tools." Psychological tools include knowledge, ability, temperament, and character. However, Jacques does not say any more about these psychological tools other than that adequate cognitive ability is not, by itself, sufficient to guarantee success. Other qualities are also necessary. It is to this next question that we shall turn; "What are those other qualities and attributes that are also required of the successful senior level commander?"

CHARACTER AND TEMPERAMENT

The attributes of character and personality which are required of senior level commanders have received a

great deal of attention in the historical literature. Military men abound who have expounded at length on this subject. Many military theorists have described the character of the senior commander. Military historians wax prolific on this topic. However, little scientific research has investigated this field which is fertile with opportunity.

In the most comprehensive review of scientific leadership research ever published, Bass (1981) concluded that, "Research on the characteristics of leaders indicates that personality is an important factor (emphasis added) in emergence as a leader and in maintaining the role" (p. 585). However, one can not consider personality in isolation. The environment and culture in which the commander exercises his authority also play important roles in determining which aspects of personality (character and temperament) are key. That is why the personality required of an allied commander, such as Eisenhower, may significantly differ from the attributes of personality required of an American corps or army commander. It is surprising, therefore that almost no scientific research has investigated the personality types of successful senior commanders and the way in which their personalities interacted with the demands of the situation to facilitate success. In fact,

based on hard data, there seems to be only one aspect of temperament which consistently characterized senior commanders in battle, boldness.

Boldness

In one of the few interdisciplinary, scientific studies of senior commanders, boldness was shown to be an important component in determining success. An interesting statistical analysis of 326 land battles described in The Encyclopedia of Military History (Depuy and Depuy, 1980), A Dictionary of Battles (Eggenberger, 1967) and Dictionary of Battles (Harbottle, 1971) was conducted by Dean K. Simonton of the University of California (1980). As reported in the Journal of Personality and Social Psychology, Simonton concluded that older generals tend to be more cautious or conservative than their younger opponents in that the younger commander is more likely to take the offensive in battle, whereas, the older general is more likely to be on the defensive. This finding is consistent with Vroom and Pahl's (1971) finding that risk taking is inversely related to age. Simonton also found that victorious generals were more likely to assume the offensive. The finding corroborates earlier research which identified initiative and aggressiveness as personality traits of leaders (Stogdill, 1948).

Finally, in regard to the character and temperament necessary for senior commanders, in the previously cited study by Campbell (1984), the investigator discovered several personality traits which seemed to be common in most generals. Based on his research, which included psychological testing and systematic observation, he concluded that present day U.S. Army Brigadier Generals tend to be "self-ccnfident, outgoing,... take-charge men... [who are] organizationally ambitious..." (p. 22). However, one must be cautious not to draw firm conclusions based on this limited sample of one-star generals. At this point in their careers none had yet proven themselves "successful" in the art of senior command, although, undoubtedly, from this group a few will achieve that exalted status. A further cautionary note is in order, because, as previously stated, this was a self-selected group, not a random sample.

In summary, we can say very little concerning the personality of senior commanders based on scientific evidence and must therefore look to the next category of attributes, knowledge and experience.

KNOWLEDGE AND EXPERIENCE

Are some senior ccmmanders born, that is, do they come by their abilities naturally? Or is a life-time of

study and experience a prerequisite? And if so, what must be learned through this study and experience? Again, while there is a great deal of historical and anecdotal evidence, there is little scientific research addressing these questions. The previously cited analysis by Simonton (1980) is the single scientific study conducted to even attempt to answer these questions by investigating the relationship between experience and battlefield success.

Experience in Battle

In this study of 326 battles comparing victorious commanders with vanquished generals, Simonton discovered some interesting facts. He found that while the age of the respective commanding generals had no effect on their probability of victory, experience was a strong predictor. In this instance experience was measured as the number of years between the general's first battle and the battle being analyzed. Strangely, however, when experience was measured as the number of battles in which the general had participated prior to the battle under study, there was no effect. In other words, experience as measured by years of battle, not numbers of battles, seems to be the significant predictor of victory!

However, in interpreting these results, a caveat is in order. Most of the 326 battles analyzed by Simonton

occurred in an age when the art of warfare was evolving relatively slowly. Therefore, the lessons that experience could teach did not change significantly over the lifetime of a single commander. As a result, experience could serve as a reliable schoolmaster. In an era where weapons, tactics, and doctrine are changing at an accelerating rate, experience may, in fact, be a detriment to effective performance because the lessons taught by experience may lose their relevance or may even be incorrect after ten to twenty years or more. Certainly, many of the lessons of World War II, or even Korea, did not prove to be terribly relevant in Vietnam.

SKILLS AND ABILITIES (DO)

The last category of senior commander attributes to be examined is skills and abilities. There is evidence that several skills and abilities which have been identified by management and behavioral scientists are prerequisites for top executiveship and, presumably, senior command. Some of these skills and abilities are highly dependent upon possession of adequate cognitive resources. These skills include: a) differentiation and integration, b) forecasting, c) decision making, and d) information processing. Other required skills, such as establishing an ethical climate, are less dependent

upon the intellectual abilities of the commander. Again, it merits emphasizing that the majority of these findings pertain to senior level civilian executives and that generalization to military commanders is highly problematic. Further, while many of these findings have been written or described by authorities with scientific training, most of these results are not truly scientific in the strict sense of the word in that they are not based on hard, quantifiable data. Rather, these are the generalizations of management scientists and organizational theorists based on their analysis and synthesis of many, many studies that, by themselves, are strictly scientific.

Differentiation and Integration

Two skills that have been identified as important for senior leadership and which are closely related to the necessity for the senior commander to possess cognitive ability are termed differentiation and integration.

The senior commander is not simply required to solve problems in specific areas but, rather, to achieve some measure of integration between the many subsystems that form the command. This function of the senior commander has been described as the "integration function" (Lawrence and Lorsch, 1967). However, the increasing

complexity of modern warfare has increased the need for greater specialization or differentiation. At the same time, this increasing complexity has increased the need for tighter coordination or integration to obtain unity of effort among the major functional specialists within the organization. Unfortunately, the need for differentiation is antagonistic to the need for integration; normally, one can be achieved only at the expense of the other. Thus, senior command entails balancing the competing organizational needs of specialization and integration, each of which must be achieved to the maximum extent possible. As an example of the increasing differentiation in modern armies, "a present day Bundeswehr division...contains some 900 different Military Occupation Specialties (MOS), as compared to only 40 in a World War II Wehrmacht infantry division" (van Creveld, 1984, p. 1). The possibility of accomplishing simultaneous integration while overseeing differentiation, like many skills and abilities and as discussed in the previous chapter, is contingent upon the commander's intellectual ability. If he does not have the conceptual skills it is impossible.

Forecasting

Another skill or requirement for senior commanders that is closely related to cognitive ability is the ability to forecast. This requires a future-oriented perspective. The senior commander must examine the organization as it is and as it will evolve under present and anticipated conditions. He must then determine where it should be in the future. To forecast, the commander must consider the political climate, future demands on the organization or units, and resource limitations - none of which can be readily quantified. The commander with forecasting ability automatically considers the future in his present thought and action. "An essential difference between an effective [commander] and an ineffective one is that the effective [commander] thinks of today's actions in terms of tomorrow's objectives, while the ineffective [commander] takes each event as it comes" (DA Pamphlet 600-15, 1968).

Objective Setting and Strategic Planning

Forecasting is difficult to describe in terms of discrete task activities because of its highly cognitive nature. If forecasting is examined as a set of operations, it is clear these operations require decision-making skills, which presumes the ability to establish broad objectives. In other word, the effectiveness of

objective setting is highly dependent upon accurate and timely forecasting.

DA Pamphlet 600-15, Leadership at Senior Levels of Command, describes the problems inherent in the setting of objectives:

> ...if missions are clear and stable, and if the objectives are precise and limited - as they usually are for tactical units in wartime - the problem of formulating objectives becomes relatively simple. However, when ultimate objectives are vague and general, and when unit objectives are subject to constant redefinition - as they tend to be for noncombat units anytime and for tactical units under current "peacetime" conditions - then the problem becomes difficult. It becomes difficult because the obvious solution - more elaborate and stricter administrative controls over objectives at all levels - may well be self-defeating, by introducing rigidity where flexibility is needed (1968, p. 94).

Forecasting and the subsequent setting of long range objectives have also been described as "strategic planning." Strategic planning differs substantivally from lower-level managerial planning and entails different skills and abilities (Ackoff, 1981). It is important to note that the concepts of forecasting, objective setting, and strategic planning, and the steps involved in initiating subsequent actions embody more than one set of operations; they refer to all operations leading to a certain result, which Carlson (1951) called "unity of action." For this reason, these functions are difficult to dissect into singular tasks.

Information Processing

The senior commander must spend a great deal of time collecting information about his unit through briefings, conferences, committees, and reports. He spends much more time accumulating and synthesizing information than he does giving orders, advising, or supervising, activities that are more important for performing the leadership and management roles (Davis, 1953; Clement, 1973). Thus, another requirement for, or component of, senior command is exceptional information processing skills. This is because at higher levels of organization, issues are more complex with a vastly greater number of variables which might potentially influence the correctness of any decision. The senior commander must be aware of the significance and impact of all these factors prior to decision making.

Decision Making

As suggested above, another necessary skill of the senior commander closely related to his cognitive ability is decision-making ability. For senior commanders, decision-making is actually policy formulation involving the alteration, origination, or elimination of organizational structure (Katz and Kahn, 1966). And

since top-level commanders often make decisions in the context of staff meetings, they must also be skilled at facilitating group discussion (Clement and Ayres, 1976).

Task and Maintenance Functions

> In rear areas the commander, high or low, wins the hearts of men primarily through a zealous interest in their general welfare. This is the true basis of his prestige and the qualifying test placed upon his soldierly abilities by those who serve under him. But at the front he commands their respect as it becomes proved to them that he understands their tactical problem and will do all possible to help them solve it (Marshall, 1947, p. 107).

In the quotation above, Marshall is describing two distinct functions of leadership that must be carried out at all levels. Organizational psychologists call these "task" functions and "maintenance" functions (Benne and Sheats, 1948, pp. 41-48). Task functions are those activities directly related to accomplishment of the unit's primary mission. Maintenance functions are those actions by the commander which strengthen the unit by maintaining high morale, esprit do corps, and close working relationships. As Marshall appropriately points out, in combat the "task functions" of the commander are paramount, that is, his ability to efficiently and effectively engage the enemy with minimum loss of life or material resources. However, as conditions more and more replicate those of peacetime, as they increasingly do the

farther away one is from the actual fighting, the more that one's subordinates expect their boss to foster a healthy and positive "command climate."

Bennis's Top Leader Competencies

Warren Bennis, former President of the University of Cincinnatti and currently of the University of California School of Business Administration, spent five years researching the attributes of top leadership. During this time he interviewed "90 of the most effective, successful leaders in the nation; 60 from corporations; 30 from the public sector" (1984, p. 15). In spite of wildly diverse personalities and attributes, he found all shared four competencies (skills and abilities). The first of these four common skills was the ability to "communicate an extraordinary focus of commitment, which attracts people to them" (p. 17). This focus resulted in a shared "compelling vision" of the desired organizational direction and goals. The second competency he identified was the ability to communicate that vision to the entire organization so that the leader's ideas were real and tangible. This often entailed the use of a metaphor or model to make the vision more clear. The third skill described by Bennis was the ability to gain the trust of subordinates by consistency of behavior or reliability. This did not

mean the leaders had to be likeable, merely that subordinates knew what to expect and could consistently depend upon it. Finally, these top civilian executives all had the ability to exploit their strengths to maximum advantage. This entailed a high degree of self-knowledge and self-confidence. Failures were always seen by these men as "temporary setbacks" or "mistakes." In fact, failure was never even recognized or acknowledged. Of course, the degree to which these conclusions drawn by Bennis and the skills and abilities he described can be generalized to senior military commanders is uncertain.

Transactional Verses Transformational Leadership

Although his perspective is basically that of an historian, James McGregor Burns (1978), attempts an integration of historical accounts and scientific perspectives of political leadership. He proposes that there are two types of leaders, "transactional" and "transformational." Transactional leaders merely engage in transactions.

> [They take] the initiative in making contact with others for the purpose of an exchange of valued things. The exchange could be economic or political or psychological in nature:... Each party to the bargain is conscious of the power resources and attitudes of the other (p. 19).

Such transactions comprise the majority of leader-follower exchanges. A common transaction within the military, for example, might be a glowing efficiency report in exchange for efficient and loyal service.

In contrast, transformational leaders transform their followers and sometimes themselves.

> Such leadership occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality... Their purposes, which might have started out as separate but related, as in the case of transactional leadership, become fused... The transforming leader...looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower (p. 4 & 21).

It is the transforming leader that we recognize as the charismatic leader, such as Napoleon or Patton. Outside the military such leaders are seen as intellectual leaders, leaders of reform or revolution, and heros or ideologues. As Burns points out, "most experimental research, unfortunately, has focused on transactional leadership, whereas the real movers and shakers of the world are transformational leaders" (1978, p. 20). However, to what extent a senior commander must be a transformational leader to be truly successful has never been investigated on a scientific basis.

Establishing Ethical Standards

Quite a few organizational psychologists and management theorists have described the role of the senior executive in establishing an ethical or moral climate for their organizations. What they have to say may or may not be applicable to the military. It is true that the senior commander finds himself set apart and thus subject to a great deal of scrutiny. Particularly subject to scrutiny is his personal sense of integrity as manifested through his behavior. Whether or not he is aware of it, the commander acts as a role model to his subordinates. Presumably, he, therefore, exercises a great amount of influence over his subordinates' behavior and ethical beliefs. A number of studies have shown that the ethical beliefs of subordinates are similar to those of their top commanders or executives (Baumhart, 1974; Newstrom and Ruch, 1975). Consequently, the commander has the potential to change and to control subordinates' behaviors by providing an important source of ethical standards. In some respects, the senior commander's requirement to establish the ethical climate duplicates somewhat the more junior leader's requirement to inculcate values. However, the values inculcated by the junior leader are more specific and limited, whereas the ethical standards of the senior commander are more global

and on a higher level. In other words, the values of the lower level leader concern the performance standards of individuals, whereas the commander's focus is on organizational standards, practices, and climate issues. This is not to suggest, however, that the focus of the lower level leader's values are incompatible with the more encompassing values of the senior commander.

One can conclude that commanders must set the example if a higher standard of ethics is to emerge in the Army since, "Corporate ethics are determined at the chief executive level and filter downward through an explicit or implicit statement of philosophy or through illustrative executive behavior" (Newstrom and Ruch, 1975). This suggests that ethical modeling on the part of commanders, particularly at the top levels of the Army, is required.

Finally, the requirement for senior commanders to be individuals of high ethical standards has been supported by many authors who have emphasized that senior executives, and presumably senior commanders, operate under stringent personal demands which call for them to demonstrate a high degree of integrity. Hemphill (1960), Drucker (1974), Mahler and Wrightnour (1973), and Reeser (1975) are a few who stressed that ethical conduct is an important requirement. Barnard (1938, pp. 272-276)

stated that the main distinction between lower-level leaders and managers and higher-level executives and commanders lies not in the degree of responsibility but in the degree of moral complexity encountered at the different levels. According to Barnard, at the higher levels, the organizational chiefs must cope with complex and numerous behavioral and moral codes of conduct.

CONCLUSIONS

In summary, it is clear that very little scientific research has been conducted using senior military commanders as the subjects of study. Almost all of the data provided by management and behavioral scientists has been derived from studies of top civilian executives. The majority of the conclusions of this chapter are only valid to the degree that these findings are also applicable to senior military commanders. The correlary to this observation is, of course, that it would be highly profitable for the senior leadership of today's Army to make themselves available for systematic analysis to determine exactly those qualities and attributes which are employed on the job and which facilitate their success. Again, these findings might only be applicable to a peacetime army. As we shall discuss further, it is very likely that combat conditions significantly alter the requirements for success. In what way and at what

levels is unclear and will remain so until scientists can study first-hand senior field commanders in combat, a development we are not likely to see in the immediate future.

Finally, as Robert L. Taylor and William E. Rosenbach, respectively, heads of the Department of Management and The Department of Behavioral Sciences and Leadership at the U.S. Air Force Academy, have concluded about the value and importance of scientific studies of leadership:

> The most rigorous study of leadership has come from the social sciences, in terms of theory and comprehensive empirical studies of leadership situations. However, it is true that social scientists have failed to produce finite results (1984, p. 3).

CHAPTER 5

Conclusions and Recommendations

> By command I mean the general's qualities of wisdom, sincerity, humanity, courage, and strictness.
>
> Sun Tzu, 400-320 BC
> The Art of War, p. 65

INTRODUCTION

Having developed definitions for leadership, management, and command, and then having surveyed the historical and scientific perspectives of senior command, what conclusions can one draw bout this most arcane of arts? Are there requirements which are consistently recognized as prerequisites for success at high levels in the Army? How can one explain the different viewpoints of the historian and the scientists? Are these viewpoints irreconcilable? What must be done to more effectively synthesize these divergent perspectives as well as advance our understanding of the art of leading large Army formations? This final chapter will attempt to answer these questions.

One simple and fairly obvious conclusion reached from this study is that the requirements for senior command can usefully be grouped into the four broad categories previously described: a) cognitive ability, b) character and temperament, c) knowledge and experience, and d) skills and abilities. These

categories of prerequisites are useful whether or not one adopts the historical or the scientific perspective. They are also useful in that they suggest which qualities and attributes might be successfully developed by coaching and instruction and which are relatively stable and less susceptible to efforts for improvement. As a general rule, one can conclude that cognitive ability as well as character and temperament are less subject to improvement by coaching or instruction than are knowledge and experience or skills and abilities. This suggests that the Army should first seek to identify those officers with the requisite cognitive ability and character and then focus developmental efforts on this group by providing appropriate schooling and coaching to develop knowledge and abilities at the same time assigning them to jobs which would afford opportunities to gain necessary experience and hone skills.

A more detailed analysis of each of the four categories of prerequisites follows.

COGNITIVE ABILITY

Both historical and scientific perspectives of senior command agree that mental abilities, variously described as "cognitive ability," "intelligence," "imagination," and "creativity" are critical to the

success of the general. Possession of sufficient intellect enables the commander at this level is to understand how his organization interrelates to a larger system and how to control this relationship. It provides him the means to understand the relationships between the organization and the larger community, including the political, economic, and social forces which impact on his organization. This conceptual ability facilitates critical decisions impacting on both the present state of the organization and the future direction it will take. Also involved is a degree of creativity which increases the senior commander's ability to coordinate all of the organization's activities and interests toward a common objective, thereby facilitating long-term planning to meet future contingencies. Cognitive ability possessed by a commander will enable him to adopt a systems perspective. "Successful [command]... requires recognition that problems usually arise from multiple causes which are increasingly complex and interdependent, and that satisfactory resolution requires a clear understanding and explicit knowledge of high level command, leadership, and management" (DA Pamphlet 600-15, 1968). Cognitive ability facilitates the intellectual aspects of commandership and, with the exception of Jacques' work, has been much neglected in

the scientific literature. This is so even though senior executives and senior commanders attest to individual differences in discerning, conceptualizing, appraising, predicting, and understanding the demands the environment places on an organization. Cognitive ability determines the commander's capacity to obtain information about the organizational environment, to interrelate environmental facts with organizational facts and to forecast the probable effects of different courses of action so as to select the best one. Cognitive ability allows him to be predictive - and being able to predict accurately is the essence of good planning. Thus, the perspective of the commander must extend beyond his own organization and its internal issues to encompass external organizational problems and opportunities which may possibly impact on his organization. The commander must be able to anticipate external influences before they arise and to plan for an appropriate adaptive response (Clement and Ayres, 1976).

CHARACTER AND TEMPERAMENT

While a great deal has been written from the historical perspective describing the character of the senior commander, very little useful research has been conducted by scientists. This merely reflects the fact that generals are loath to make themselves the objects of

scientific study and analysis. From the historical evidence one can conclude with certainty that character and temperament, that is, aspects of personality, are important components in the making of a successful senior commander, and that the historical perspective has consistently identified the traits of boldness and courage as essential. These traits have been marked as particularly critical during wartime conditions.

Many authors writing from the historical perspective have also identified presence of mind, strength of will, and independence of mind as vital for success as well as the traits of determination and ambition. This last group of traits all reflect an intense focus on task accomplishment or mission orientation. This concentration on getting the job done represents an investment of psychic and physical energy without which success is doubtful.

KNOWLEDGE AND EXPERIENCE

Conclusions regarding the necessary knowledge and experience for commanding generals resemble those concerning prerequisites for character and temperament in that there is a great deal of historical analysis and testimony and little scientific evidence. Again, this reflects the paucity of quantitative research employing

general officers as the objects of study. In any case, one is forced to rely exclusively on historical sources in concluding that knowledge of the art of war, that is, tactics, operational art, and strategy are important. One might also conclude, with less certainty, that knowledge of administrative and logistical aspects of warfare as well as knowledge of human nature are also critical. Finally, experience in battle seems to be an important predictor of battlefield success for combat commanders.

SKILLS AND ABILITY

There is wide diversity between the historical and scientific perspectives in the skills and abilities which are reported as being essential to the high commander. Part of this diversity is more apparent than real and stems from the difficulty in distinguishing between knowledge and experience on the one hand and skills and abilities on the other. While the historical perspective focuses more on requisite knowledge, with the implicit assumption made that knowledge can be translated in actions or behaviors, the scientific perspective tends to focus on the behaviors or skills themselves and assumes that requisite knowledge must be present. Thus, the historian might argue the necessity for knowledge of the

art of war while the scientist will state the requirement as skill in the practice of war.

Another reason why there is difficulty in specifying the required skills and abilities of the senior commander is because, to a large degree, they are situational. There is a great deal of evidence which supports this conclusion (Bass, 1981, pp. 405-488). A large body of research substantiates the finding that organizations seek leaders who can both articulate the organization's objectives and direct the activities of the organization's members so as to obtain those objectives. This generalization obtains in both the scientific and historical perspectives. This suggests that the skills and abilities required of the senior commander depend, to a large extent, upon the mission of his organization. Thus, we may conclude that many of the skills and abilities required of a three-star theater army support command commander differ from those of the three-star corps commander in the same theater. The task skills of the senior commander which change depending upon organizational level and objectives can be termed "technical competencies." The skills and abilities which constitute technical competence for a peacetime recruiting commander clearly differ from the skills and abilities which constitute technical competence for a

wartime division commander. This does not deny that there may, in fact, be overlap between the two. It is just that they are not necessarily the same.

In summary, both scientific and historical perspectives seem to indicate that the more divergent the missions and objectives of organizations the greater will be the differences in requisite skills and abilities of their leaders. However, there is very little agreement concerning which skills and abilities are important at this level of command. In other words, given our current level of knowledge it is impossible to state which skills and abilities are critical for senior commanders.

SITUATIONAL DETERMINANTS

The preceding recapitulation of the necessary attributes for high command is not an all inclusive list. It is merely a summary of those characteristics which seem to be most critical and which have been most frequently identified in the historical and scientific literature. However, requirements for leadership cannot be studied totally in isolation from the conditions which shape the environment. In other words, leaders must respond to both the demands of the situation and the expectations of their subordinates. As Bass (1981) concluded in his exhaustive review of the leadership literature,

> Research results suggest that the traits [character and temperament] and abilities [skills and abilities] required of a leader tend to vary from one situation to another. The best predictor of leadership is prior success in this role. But previously successful leaders may fail when placed in a situation that imposes demands incompatible with their personality...(p. 585).

As situations change, as values, attitudes and capabilities of subordinates vary, and as organizational missions differ, the relative importance of different senior leader attributes will increase or decrease proportionately.

In other words, the command style of a general must be in consonance with the environment in which he operates. Environmental factors which might impact on the required attributes include, but are not limited to, the structure and level of competence of his staff and the rest of his subordinates. The less experienced and capable they are the more specific direction will be required. The cultural and doctrinal setting is also important. For example, in the British Army, a general would more likely meet with success if his command style was compatible with the "British way of war," that is, structured to arrange set-piece battles, with heavy reliance on material superiority. A flamboyant and impetuous Rommel, Guiderian, or Patton would be much less

likely to achieve success in such an Army in such a cultural and doctrinal setting (Cirillo, 1985b).

Another essential element in the senior command equation is the nature of the followers. To the degree that subordinates differ, the styles and techniques of leadership and prerequisites for effective command will differ. The personality and characteristics which will win the admiration and devotion of a division of infantry fighters may differ markedly from those which will be most effective in commanding a logistics training facility simply because the men being led are so different. As Thomas E. Cronin reports, in his essay, "Thinking about Leadership," in Military Leadership: In Pursuit of Excellence,

> We cannot really study leaders in isolation from followers, constituents or group members. The leader is very much a product of the group, and very much shaped by its aspirations, values and human resources. The more we learn about leadership, the more leader-follower linkage is understood and reaffirmed. A leader has to resonate with followers (1984, p. 195).

One might think of a host of other variables that could effect the type of command style which would prove most effective. These variables would include the nature of one's enemy, the style of warfare being conducted, and, of course, the mission of the forces. It follows, therefore, that one can only generalize with certainty about the requirements for senior leadership to the

degree that it is possible to generalize about situations. The situational nature of senior leadership has been well described, again, by Cronin.

> A person may be an outstanding leader here, but fail there. Trait theory has been thoroughly debunked. In fact, leadership is highly situational and contextual. A special chemistry develops between leaders and followers and it is usually context specific (1984, p. 194).

It would seem, however, that there should be commonalities in the situations faced by senior commanders. All are operating in "military" environments with similarities in organizational size and culture. One could possibly draw up a list of situational characteristics common to senior command. In other words, there should be a great deal of overlap in the characteristics of the situations faced by all generals commanding at the two-star level and above irrespective of the type of unit they are commanding. The preceding sections of this chapter, then, have attempted to summarize the leader requirements that are common to the situations faced by all commanding generals at division level and higher.

In essence, in response to the question, "What are the requirements for senior command?" we must rely on the overused aphorism, "It depends upon the situation." But as we have seen, this is only a partial qualifier because

there generally are commonalities. Certainly, the most critical situational factors which influence the desirable characteristics of the senior commander are whether or not he is commanding in war or peace and whether he is a combat commander, an administrative or logistical commander, or the commander of a highly technical unit. It is clear that as the U.S. Army has become more and more complex the differentiation between warrior-leaders and soldier-managers has become greater and greater. As early as 1960, Professor Morris Janowitz, writing in the classic The Professional Soldier (Chapter 2) noted that there were three classes of officers, the heroic leaders who are directly involved in combat, the military managers who perform the administrative and organizational functions, and the military technologist who possesses highly specialized skills. We now turn to a discussion of the situational characteristics which influence our heroic leaders and how these differ for the other classes of officers.

War and Peace

From the preceding discussion one can conclude that the successful peacetime generals are not necessarily also most effective in combat positions. Most analyses of the differences in senior commandership

requirements, however, have come from the historical perspective and have only pertained to wartime conditions. To Napoleon and commanders of earlier eras, the very notion of military genius being exhibited in peacetime was foreign. One could not rise to true greatness without the field of battle upon which to demonstrate one's gifts. Formerly, and to a certain extent today, peacetime military leaders and generals were chosen for their administrative and organizational skills, for their ability to control the bureaucracies associated with maintaining large standing armies. Often, an even more important considerations was their political skills. In peace, to a much greater extent than during war, being socially well-connected and the cultivation of friends in high places was critical to the attainment of high command. Strictly martial virtues such as physical courage and tactical and operational expertise were secondary.

Frank Knox, Secretary of the Navy during World War II recognized the changing requirements for generals from peace to wartime conditions. In writing to Admiral Chester W. Nimitz concerning the selection of flag officers, he offered this observation:

> I presume most of us, if we had been required to choose at the beginning of the war between the brilliant, polished, socially attractive [Maj. Gen. George B.] McClellan and the rough,

> rather uncouth, unsocial [Brig. Gen. Ulysses S.] Grant, would have chosen McClellan, just as [President] Lincoln did (Hoyt, 1971, p. 168).

As Cirillo points out "Secretary Knox was admonishing Adm. Nimitz to promote aggressive fighters, not the peacetime stars as Gen. McClellan had once been" (1985, p. 14).

The case of Major General Lloyd R. Fredendall is another example of this phenomenon. Prior to America's active participation in World War II he was considered one of the Army's brightest stars. Accordingly, he was selected to command II Corps in the United States's first combat action in North Africa. However, in America's baptism of fire, "a confused nightmare" called the Battle of Kasserine Pass (Stokesbury, 1980, p. 230), Fredendall remained miles from the front deep in his command post caves. The subsequent disintegration of II Corps, and the loss of confidence in Fredendall's ability by his subordinates, resulted in his relief and the transfer of command to a more effective fighting general, George S. Patton (Weigley, 1981, p. 119).

Even civilian executives have recognized the difference between commandership during war and in peace. John Gardner, the former Director of Common Cause and the Secretary of Health, Education, and Welfare remarked that,

> One sees solemn descriptions of the qualities needed for leadership without any reference at all to the fact that the necessary attributes depend on the kind of leadership under discussion. Even in a single field there may be different kinds of leadership with different required attributes. Think of the difference between the military hero and the military manager (1984, p. 186).

One finding that is constant in both historical and scientific approaches to generalship is that the value and importance of boldness change between wartime and peacetime conditions. As Wavell said, "It is in peace that regulations and routine become important and that the qualities of boldness and originality are cramped" (1941, p. 43).

Cirillo (1985) expressed similar views:

> Peacetime brings heightened expectations and sometimes myopic views on professionalism. Shiny belt buckles and the ability to look good seem to the cynic to supplant a deeper professionalism. A man's dedication to the profession of arms, his knowledge and ability are not always perceived...by a superior. The loyalty of candor is often mistaken for rebellion (p. 15).

An example of the same problem in reverse is the case of General Patton. While he "was the Army's master of the operational art, ...the same characteristics that often brought battlefield success made it impossible to place him in a job at the war's end" (Cirillo, 1985, p. 15).

It is not the intent of this paper to <u>prove</u> that the characteristics required of senior commanders in war

differ from those required in peace and that the most effective peacetime commanders are not necessarily the best warrior leaders. However, the historic evidence seems to indicate that peacetime commanders with successful records will not necessarily be the most effective combat leaders and vice versa. On the other hand, not all senior peacetime leaders are ineffective in war, and not all combat generals are ineffective upon the termination of hostilities. In regard to the transferability of leadership skills between situations, Thomas E. Cronin concluded that the evidence is mixed. "Certain persons have been effective in diverse settings." Both George Washington and Dwight Eisenhower were effective wartime commanders who successfully made the transition to peacetime presidents. In fact,

> Scores of military leaders have become effective in business or politics or both. However, there are countless examples of those who have not met with success when they have tried to transfer their leadership abilities from one setting to a distinctively different setting. Sometimes this failure arises because the new group's goals or needs are so different (1984, p. 195).

Also, the conditions under which the respective jobs must be accomplished are vastly different, the expectations of subordinates vary, and the criteria for success are not similar either.

In summary, the requirements for senior command vary

according to the conditions under which command is exercised and the job position of the commander. Therefore, attempts to generalize about the qualities and attributes of the successful senior commander without specifying whether such command is during peace or in war, in combat units, in administrative and logistical organizations, or in bureaucratic staff agencies, such as the Department of the Army and the Joint Chiefs of Staff, are suspect at best, and erroneous at worst.

Front and Rear

A second significant situational determinant of the qualities and attributes which contribute to successful high command relates to the issues of war verses peacetime command, however, it is only applicable in war. The issue is, whether the general exercises command from the front or from the rear of his combat formations. Historically speaking, this is a question that would make sense only fairly recently.

As van Creveld (1984, p. 14) points out, it was not until the second half of the seventeenth century that senior commanders habitually started taking their place behind, rather than in front of, their men and Frederick the Great was probably the first commander-in-chief regularly depicted as wearing a coat of linen rather than of armor. From his day to ours the physical location of

the commander in relation to his troops has undergone many peregrinations.

This changing role of the commander was noted in its extreme form by the Chief of the General Staff and architect of the German strategy in World War I, von Schlieffen in his book Cannae (1913). He said:

> The modern commander-in-chief...is farther to the rear in a house with roomy offices, where telegraph and wireless, telephone and signalling instruments are at hand, while a fleet of automobiles and motorcycles, ready for the longest trips, wait for orders. Here, in a comfortable chair before a large table, the modern Alexander overlooks the entire battlefield on a map. From here he telephones inspiring words, and here he receives the reports from army and corps commanders and from balloons and dirigibles which observe the enemy's movements and detect his positions (Heinl, p. 132).

The idea of the senior commander miles and miles to the rear of the front lines, studying maps and messages and directing the battle from the safety and comfort of a secure headquarters was foreign to the great captains of earlier days. Admittedly, Napoleon did not always share danger and hardship equally with the lowest soldier, but there were many times when he and other military greats did, in fact, use their physical presence in battle to inspire subordinates, to control the disposition of forces, and even to lead troops by their personal example and bravery. This was seen by writers of that era as a key ingredient of military greatness. This is why

courage has always been listed at or near the top of everyone's list of characteristics of great commanders.

Another incomprehensible notion to the thinking of pre-World War I military writers was the concept of directing a war from one's capitol, an ocean's distance from the fighting. Under the criteria of the early historians, General of the Armies George C. Marshall, one of America's greatest military figures, would never have been admitted to the hall of honor wherein reside Caesar, Scipio, Alexander, Hannibal, Frederick, Suvorov, Patton, and Guiderian. After all, Marshall had spent the First World War as a member of Pershing's staff at the headquarters of the American Expeditionary Force. During the Second World War, he was far from danger in Washington, D.C. It was here, an ocean's distance from bullets and bombs that he gained his reputation as the "architect of victory." Marshall might have been considered by earlier military theoreticians as a superb bureaucrat, the consummate organizer, a brilliant intellect, and an astute judge of character with the ability to pick the right man for the right job. But a military genius? Never.

Van Creveld adds that the primary reason senior commanders have increasingly gravitated to the rear of

the battlefield is the growing complexity of the forces, the expanding distances over which they are spread, and the consequent difficulties in controlling and coordinating these forces. However, soldiers in battle require motivation as well as control and coordination. "In so far as the motivating duties of a commander are best discharged way out front among his troops, whereas the coordinating ones require his presence at a fixed and detached point somewhere to the rear, the two functions clearly contradict each other" (1984, p. 13). In other words, because of the changed nature of battle and the battlefield the senior commander must choose between being forward to motivate the few soldiers whom he can physically influence or being to the rear in his command post to control the battle through the allocation of combat power and the commitment of forces.

SCIENTIFIC AND HISTORICAL PERSPECTIVES

One of the objectives of this study has been to examine the differences between the historical and scientific perspectives of senior command to explain the differences revealed by these divergent approaches to the study of a single phenomenon and, where possible, to reconcile these differences. The following incident involving the highly decorated combat leader and Chief of Staff of the Army, General Creighton W. Abrams,

exemplifies the necessity for understanding both perspectives of leadership and senior command and how divergent they truly are.

In the Spring of 1973, Abrams visited West Point and sat in on some academic classes. Later, recounting the episode, the General said,

> Lemme tell you something,.. I visited some military psychology and leadership classes. The signs on the door said "Leadership." Y' know something else? I sat there for about 15 minutes and didn't understand a goddam thing the instructor said. And I don't think the cadets did either. But one thing I do know; whatever that guy was talking about, it doesn't have anything to do with leadership... (Taylor, 1980, pp. 40-41).

Of course, the instructor was providing the scientific perspective of leadership, which, to one of the American Army's most famed soldiers, was both incomprehensible and irrelevant.

What follows is an analysis of the causes of the misperceptions exemplified in the preceding anecdote. While admittedly exaggerated, it is offered to illustrate the difficulties in reconciling scientific and historical perspectives. By presenting these extreme positions the problem can be more readily understood.

It is uncommon tc find an author writing from the historical perspective who demonstrates an understanding of scientific examinations of the leadership-commandership process. Historians tend to feel that

senior command is essentially a cultural and sociologic process and therefore not subject to absolute, quantitative analysis. They also may consider scientific approaches to the study of senior command as irrelevant at best, focusing on minutia taken out of the context of the cultural and historical milieu in which the senior commander must operate. To historians, scientific approaches are seen as excessively analytic and objective and therefore, inappropriate in a field such as leadership and commandership which is primarily subjective. As historians see it, the focus of the senior commander is on synthesis and integration, the bringing together and combining of knowledge. They feel that scientists, by the nature of their discipline, engage in analysis, that is, the division of data and knowledge into its component parts. This results in reductionism. Historians feel that the scientific approach, while concentrating on minutia merely because it can be measured reliably, ignores the totality and misses the essence of the art of senior command. Historians and modern soldiers with an historical orientation seem to feel that scientific studies of senior command are, at worst, "touchy-feely" and a guise for the proselytization of humanitarian or permissive

values which are in opposition to the traditional military ethos. These values are seen as prejudicial to military efficiency and, in fact, have the effect of making the job of the senior commander even more difficult.

On the other hand, scientists who have studied high command have demonstrated a similar lack of understanding of historians and the historical approach. To behavioral and management scientists who employ quantifiable, analytic techniques, historians are viewed as unsystematic and imprecise. Their observations are seen as anecdotal and unrepeatable. Their conclusions are viewed as suspect, colored by the observer's own values and culture. The scientist feels that by attempting to describe everything at once the historian describes nothing at all. To the scientist the prescriptions of the historian are so general as to be little more than maxims and platitudes and have scant value in describing exactly how a senior commander might increase his competency. Finally, in the scientist's eyes, historians are so inexact in their use of words that commonality of understanding is impossible.

There are two primary reasons why scientists and historians do not understand each others' approach to the study of senior command and leadership. The first reason

is that they use language differently. The second reason, an outgrowth of their different training, background, and experiences, is that they view the world differently.

To the scientist, precision of definitions is essential. He recognizes that words have many different meanings and that a simple concept can be operationalized (defined for the purpose of measurement) in many different ways. For example, the concept of "experience" can have many different meanings. The scientist would argue that while many historians profess the need for the senior commander to have experience it is never clear what exactly he must be experienced in. Does experience simply mean experience in war, and, if so, is it measured by the length of time the commander has spent at war, the number of bat s he has fought or the different types of enemy he has engaged? Is it measured by varied terrain he has fought over or even by the length of time he has spent in the military? These are important questions to the scientist because he might determine that one measure of experience is related to success as a senior commander while another seems to have no influence. And because there are differences in the effects of various operationalizations of the same term, for the scientist, it is imperative that words be used only in an exact

sense. The scientist will, therefore, always define his terms to assure that the reader understands the precise concept he is describing. If the scientist can not reliably and validly measure a concept or attribute, such as strength of will or coup d'oeil, he will choose not to deal with it.

The historian is less exact in the use of words because, to him, there is no requirement to "measure" the concepts that he describes. He would argue, for example, that while "boldness" as a personality trait is essential for the senior commander, its presence or absence can only be inferred based on a comprehensive analysis of the past actions of the commander. Any attempt to measure boldness by a paper and pencil personality survey or by injecting the commander into a contrived situation, usually in an experimental setting, is fallacious. This is so, the historian concludes, simply because such measures only evaluate how a commander responds to paper and pencil tests or how bold one behaves in artificial settings. Any attempts to generalize to other situations, particularly combat, where the potential risk and loss are so great, are merely mental exercises delving into the realm of fantasy. Therefore, the historian will describe the senior commander using such terms as boldness, perseverance, vigor, imagination, and courage

without bothering that he has not precisely defined these words. He understands the concepts and expects that the reader will understand them also. James L. Stokesbury, coauthor of Masters of the Art of Command (1975), recognized this dilemma. As he explained it,

> ...the problem for the humanist describing the leader is that he is trapped by the inadequacies of the language to describe qualities that defy precise definition. A leader, he may say, needs courage, resolution, self-reliance, and on and on. But he can only define any one of these terms by reference to others of them, and in the end he has produced a tautology... (1984, p. 6).

Thus, by their very nature and training, scientists and historians will use words differently. The former insist on precision of meaning and the employment of concepts that can be measured. The latter use words in their cultural context with the assumption that any educated member of that culture, the persons for whom they write, will understand the words with both their denotative and connotative meanings.

The second reason why scientists and historians have difficulty communicating is because of different world views and how these world views are reflected in their approaches to problem solving. Because the scientist deals in the realm of concrete, observable, quantifiable data, employing measurements which can be replicated, his focus is in the gathering of data which can then be

manipulated and analyzed. From the specific facts and individual cases of his study he will then draw general conclusions concerning the effect of a particular variable under study. For example, from individual measurements of IQ and performance he would analyze the mathematical relationships between these measurements and then state that relationship as a principle, such as, "Leaders tend to be more intelligent than their subordinates, but not too much more intelligent." This method of problem solving and logic can, of course, be recognized as the logical process of induction. It is the embodiment of the scientific method, the building of laws and the discovery of relationships based on individual observations and measurements. The initial focus is downward, gathering small bits of data which can then be employed for a higher level generalization.

In contrast, the initial focus of the historian is not downward, to gather discrete bits of information, but upward, to determine the historical and cultural environment in which any event occurs. Individual cases and particular events can only be understood in context, looking beyond the immediate event to discover the external forces which may have exerted shaping influences on an individual's actions or upon the outcome of any historical event. This process is not the realm of the

quantifiable and the concrete; it is the realm of the subjective and the abstract. Based on a subjective and abstract analysis the historian formulates generalizations and principles which form the basis upon which he draws conclusions concerning specific events or unique individuals. This is, of course, the logical process of deduction and is the essence of the historical method. As an example, an historian might argue that the way in which Napoleon took a hungry and near mutinous army and motivated them to become the masters of the continent is best understood by an analysis of the animating spirit of the French Revolution and the effects of the first national (as opposed to monarchical) army in Europe, rather than by studying Napoleon's use of rewards and punishment, or the way in which he was able to satisfy his subordinates' needs for achievement.

James Schneider, Professor of Military Theory at the School for Advanced Military Studies, Command and General Staff College, and the U.S. Army's only full-time heorist, accounts for the differences between historical and scientific perspectives of leadership and command based on the functioning of the human mind. According to Schneider,

> The nature of the human mind is characterized by a fundamental duality that is rational as well as intuitive. This duality of mind is rooted in the physical structure of the brain

> itself, divided as it is into two interdependent hemispheres with one being functionally dominant. In human individuals we generally find a bias favoring one aspect of the duality over the other. Those with a rationalistic bent tend to be highly inductive; those with an intuitive stance tend to take a holistic view of reality... The rational, left hemisphere is oriented toward the finite; the intuitive , right hemisphere to the infinite... (see Rudy Rucker, Infinity and the Mind). It is this later characteristic of the human mind that has profound military implications,.. especially with respect to the nature of military genius... Flashes of insight, ideas, visions, etc. are fundamentally flashes of infinity. However, in order to communicate these ideas, they must be "translated". This is done by the left hemisphere which controls our abilities to verbalize, communicate, etc. Also imbedded therein is the structure or grammar, of language which is fundamentally rational and finite (author's emphasis). The task then is to translate the infinite into the finite - an exceedingly difficult task (1984, pp. 1-2).

In summary, scientific perspectives and historical perspectives of the study of high command are extremely difficult to reconcile for several reasons. Of primary importance is that they view the world in different ways. They use language differently; they have divergent methods for problem solving; and they use opposite processes of logic. Considering these differences it is not surprising that historians and scientists have difficulty carrying on dialogue or cooperating to answer questions of mutual concern.

CONCLUSIONS

In spite of the dearth of scientific data concerning high command and the plethora of conflicting historical analyses one significant conclusion seems to emerge. Simply put, at higher levels of command character become more and more important. This is not to say that knowledge and ability are unimportant, merely that we can not say with a high degree of certainty what specific knowledge is critical. As the section on situational determinants suggests, it seems that requisite skills and ability, knowledge and experience are highly situational. The requirements for cognitive ability and character and temperament, on the other hand, appear to be more constant. That is, they are necessary in all types of command in both war and peace.

Interesting enough, Clausewitz, the foremost military theoretician of all times, seems to agree. He defines "military genius" strictly in terms of the first two categories, cognitive ability and character. To Clausewitz, military genius consists of the harmonious combination of "all those gifts of mind and temperament that...bare on military activity" (1832, p. 100).

Similarly, if we simply examine the volume of evidence supporting the requirements for senior command,

we reach the same conclusion. There seems to be unanimity in the historical and scientific literature that the intellect and character of the senior commander are critical. There is little agreement concerning what specific knowledge is important or the value of experience. Also, there is wide variety in the types of skills and abilities that are touted as being important and little consensus concerning the situations in which these skills and abilities are critical.

An important aspect of who the commander is, that is, his character, temperament, and intellect, verses what he knows or can do, is the way in which he represents a symbol to his followers. Great military commanders have symbolized or embodied such concepts as victory and patriotism. In a study of four great military leaders from the 15th to the 20th century (Montrose, Suvorov, Lee, and Petain), Stokesbury concluded that great military commanders "believed in a cause which transcended themselves and their own desires or ambitions... [although] it is probable that their followers believed less in the causes than they did in the men who led them" (1984, p. 15). In building support for this view, Stokesbury cites two renowned generals, Charles de Gaulle and Bernard Montgomery. According to de Gaulle,

> ...all great leaders of men, whether as political figures, prophets, or soldiers, all those who can get the best out of others, have always identified themselves with high ideals... They stand for greatness of mind rather than self-interest... (1960, p. 65).

Similarly, Montgomery felt that one of the prime requisites for a senior leader was "...an absolute devotion to the cause he serves with no thought of personal reward or aggrandizement" (1961, p. 17).

S.L.A. Marshall also concluded that it was the character of senior commanders which distinguished them and that this character was not nearly as important at lower organizational levels. Writing in The Armed Forces Officer (1975), he observed that relatively few great military leaders of the past were acclaimed for their leadership qualities earlier in their careers. Instead, these men rose to greatness based on certain "inner qualities," rather than outward marks of greatness which were evident from the beginning. He further added that technical or tactical ability and knowledge did not seem to be critical factors and that intellect and personality were most important in getting the job done. He added,

> There have been great and distinguished leaders in our military Service at all levels who had no particular gifts for administration and little for organizing the detail of decisive action either within battle or without. They excelled because of a superior ability to make use of their brains and command the loyalty of well chosen subordinates (1975, p. 44).

The implications of this conclusion, that character and intellect are more important at higher levels of command than are knowledge or ability, are significant. First, the most critical attributes, cognitive ability and character are the least susceptible to development or improvement. By the time an officer is commissioned there is little that can be done to improve his intellectual ability. Likewise, most psychologists agree that basic personality is also fairly well established by this time. Therefore, in considerations of intellect and temperament the Army must focus its efforts on early identification and selection of those with the potential for development into senior commanders.

Second, and by implication, the Army must concentrate on providing the requisite education and training as well as developmental experiences and assignments to those junior officers who have exhibited the necessary intellectual ability and character. Only in this manner will they be afforded the opportunity to develop the skills and abilities appropriate for their higher levels of responsibility.

RECOMMENDATIONS

Because past studies of generalship have failed to examine the differences in requirements between war and peace, and between the direction of combat,

administrative and logistical, and bureaucratic staff organizations, there is no systematic body of knowledge or little conclusive evidence concerning what is required of our senior commanders. This suggests that the selection, training, and placement of our general officer corps is much less effective than it might otherwise be. In our current system the various Chiefs of Staff of the Army have assumed responsibility for these tasks. Because there is little historic or scientific data to guide or aid them in these tasks past Chiefs have been forced to rely exclusively on their intuition, judgment, and the advise of subordinates in directing the general officer corps. With aid of historical analysis, factual information, and scientific data, a significant improvement in the management of these senior commanders might be expected.

Accordingly, the Center for Army Leadership, at the U.S. Army Command and General Staff College, should be charged with designing a systematic, long term research effort which would help to fill the existing void in our knowledge of the qualities and attributes of our senior commanders. This would be done in conjunction with the Army Research Institute for the Behavioral and Social Science, the Department of the Army Leadership Division of the Human Resources Directorate of the Office of the

Deputy Chief of Staff for Personnel, The Army Center for Military History, and the Department of Behavioral Sciences and Leadership and the Department of History at the United States Military Academy. The resources for this project currently exist. The conduct of such a research effort would require no substantial outlay of funds. The efforts of the various agencies merely need to be coordinated and appropriately directed.

If the results of such a research project are to have any impact, it is imperative that historians and behavioral scientists jointly design and conduct the research as well as write the results in such a way that they will be palatable to both the historical and scientific communities as well as the Army at large. This integration of the efforts of historians and scientists will be no small task. It will require patterns of reason and logic that go beyond the simple accumulation and interpretation of data. James Schneider illustrates well the problem and the difficulty.

> Poincare believed that there was a clearly defined, finite path leading from the empirical facts to the scientific truth. Einstein, demonstrating great intellectual courage, boldly moved in another direction. He suggested that there existed a huge abyss between the empirical data and the underlying conceptual reality. This conceptual abyss could only be bridged by "daring speculation," rather than the mere "accumulation of facts" (see Arthur J. Miller, Imagery in Scientific Thought)... The difference between Einstein and

> Poincare is the difference between Rommel and Ritchie... Some of us are able to leap intuitively to tall buildings in a single bound. Others of us are condemned to wander aimlessly about in the sewers of minutia and trivia (1984, pp. 3-4).

In spite of the difficulties, however, an attempt must be made to synthesize what are presently two divergent schools of thought and to bring order to a leadership doctrine in disarray.

It is imperative that this joint research effort seek to identify differences between the characteristics of combat commanders, rear echelon commanders, and peacetime generals. As this paper has attempted to show, there are differences, although these differences are not well understood at this time.

The product of such an effort would be an improved and coherent doctrine describing the attributes and characteristics of senior commanders as required in various situations or job types. Such a doctrine would prove invaluable in aiding in the selection, preparation, training, and assignment of our general officer corps. When one considers the potential payoff the investment is small. After all, what is the value of a MacArthur or an Eisenhower, a Marshall or a Pershing, a Grant or a Lee? The cynic will argue that since these men rose to greatness without the "benefit" of sophisticated and

lengthy behavioral science and historical analyses of high command, and since we have not needed such knowledge in the past, then, why should we do anything differently now? The answer, of course, is so that the Army can place the right man in the right job, at the right time, without suffering the mistakes of trial and error and the attendant costs which manifest themselves in battle as needless casualties, relieved commanders, and lost battles. In future wars there will be no time to recoup the losses which result from the ineffective performance of even a few senior combat commanders. The shattered career of the "brilliant" Lloyd Fredendall and the debacle at Kasserine Pass illustrate the cost of mistakes in the selection and assignment of general officers. The nation can not afford to repeat the process which President Lincoln was forced to undergo in "trying out" field commanders before settling on the unexpectedly gifted General Grant. The above are examples of problems which might be avoided by the knowledge gained from a research program as described. The cost is small. The potential gain is great. We must begin now, in earnest, and with vigor.

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